Analytical Data Package Prepared For

Pacific Northwest National Lab

Radiochemical Analysis By

STL Richland STLRL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains _____ Pages

Report Nbr: 30659



SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04769	105-053	B1DP28	J5I200383-1	HK1L31AA	9HK1L310	5273295
		B1DP28	J5I200383-1	HK1L31AC	9HK1L310	5273293
		B1DP28	J5I200383-1	HK1L31AD	9HK1L310	5273298
		B1DP85	J5I200383-2	HK1MJ1AA	9HK1MJ10	5273295
		B1DP85	J5I200383-2	HK1MJ1AC	9HK1MJ10	5273267
		B1DP85	J5I200383-2	HK1MJ1AD	9HK1MJ10	5273293
		B1DP85	J5I200383-2	HK1MJ1AE	9HK1MJ10	5273300
		B1DP85	J51200383-2	HK1MJ1AF	9HK1MJ10	5273298
	W05-009	B1DTH7	J5I220336-1	HK6411AA	9HK64110	5273266
		B1DTH0	J5I220336-2	HK65D1AA	9HK65D10	5273266
		B1DTH5	J5I220336-3	HK65H1AA	9HK65H10	5273295
		B1DTH5	J5I220336-3	HK65H1AC	9HK65H10	5273267
		B1DTH5	J51220336-3	HK65H1AD	9HK65H10	5273293
		B1DTH5	J5I220336-3	HK65H1AE	9HK65H10	5273266
		B1DTH5	J5I220336-3	HK65H2AF	9HK65H20	5321304

Comments:

Report Nbr: 30659

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04769	W05-009	B1DTF5	J5I220336-4	HK65R1AA	9HK65R10	5273295
		B1DTF5	J5I220336-4	HK65R1AC	9HK65R10	5273266
		B1DTF5	J5I220336-4	HK65R2AD	9HK65R20	5321304
		B1DT91	J5I220336-5	HK6541AA	9HK65410	5273266
		B1DT91	J5I220336-5	HK6542AC	9HK65420	5321304
	105-054	B1DTX3	J5I220345-1	HK66R1AA	9HK66R10	5273295
		B1DTX3	J5I220345-1	HK66R1AC	9HK66R10	5273296
		B1DTX3	J5I220345-1	HK66R1AD	9HK66R10	5273298
		B1DTX3	J5I220345-1	HK66R2AE	9HK66R20	5321304
	W05-009	B1DT65	J5I220359-1	HK69R1AA	9HK69R10	5273304
		B1DT65	J5I220359-1	HK69R1AC	9HK69R10	5273293
		B1DT65	J5I220359-1	HK69R1AD	9HK69R10	5273300
		B1DT65	J51220359-1	HK69R1AE	9HK69R10	5273266
		B1DT65	J51220359-1	HK69R2AF	9HK69R20	5321304
		B1DT57	J51220359-2	HK6921AA	9HK69210	5273304
		B1DT57	J51220359-2	HK6921AC	9HK69210	5273293
		B1DT57	J51220359-2	HK6921AD	9HK69210	5273300
		B1DT57	J5I220359-2	HK6921AE	9HK69210	5273266
		B1DT57	J5I220359-2	HK6922AF	9HK69220	5321304
		B1DTD2	J5I240201-1	HLDCC1AA	9HLDCC10	5273295
		B1DTD2	J5I240201-1	HLDCC1AC	9HLDCC10	5273266
		B1DTD2	J5I240201-1	HLDCC2AD	9HLDCC20	5321304
		B1DTD7	J5I240201-2	HLDCF1AA	9HLDCF10	5273266
		B1DTD7	J5I240201-2	HLDCF2AC	9HLDCF20	5321304
		B1DTD8	J5I240201-3	HLDCG1AA	9HLDCG10	5273266
		B1DTD8	J5I240201-3	HLDCG2AC	9HLDCG20	5321304

Report Nbr: 30659

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04769	105-054	B1DTY1	J5I240202-1	HLDCH1AA	9HLDCH10	5273295
		B1DTY1	J5I240202-1	HLDCH1AC	9HLDCH10	5273296
		B1DTY1	J5I240202-1	HLDCH1AD	9HLDCH10	5273298
		B1DTY1	J5I240202-1	HLDCH1AE	9HLDCH10	5273266
		B1DTY1	J5I240202-1	HLDCH2AF	9HLDCH20	5321304
		B1DTY6	J5I240202-2	HLDCJ1AA	9HLDCJ10	5273295
		B1DTY6	J5I240202-2	HLDCJ1AC	9HLDCJ10	5273296
		B1DTY6	J5I240202-2	HLDCJ1AD	9HLDCJ10	5273298
		B1DTY6	J5I240202-2	HLDCJ1AE	9HLDCJ10	5273266
		B1DTY6	J5I240202-2	HLDCJ3AF	9HLDCJ30	5321304
	W05-009	B1DTC4	J5I240203-1	HLDCL1AA	9HLDCL10	5273266
		B1DTC4	J5I240203-1	HLDCL2AC	9HLDCL20	5321304
		B1DRW4	J5I240203-2	HLDCM1AA	9HLDCM10	5273295
		B1DRW4	J5I240203-2	HLDCM1AC	9HLDCM10	5273267
		B1DRW4	J5I240203-2	HLDCM1AD	9HLDCM10	5273293
		B1DRW8	J5I240203-3	HLDCN1AA	9HLDCN10	5273295
		B1DRW8	J5I240203-3	HLDCN1AC	9HLDCN10	5273267
		B1DRW8	J5I240203-3	HLDCN1AD	9HLDCN10	5273293
	A05-013	B1DMV7	J5I240204-1	HLDCP1AA	9HLDCP10	5273296
		B1DMV7	J5I240204-1	HLDCP1AC	9HLDCP10	5273266
		B1DMV7	J5I240204-1	HLDCP2AD	9HLDCP20	5321304
		B1DMT9	J51240204-2	HLDCT1AA	9HLDCT10	5273296
		B1DMT9	J51240204-2	HLDCT1AC	9HLDCT10	5273266
		B1DMT9	J5I240204-2	HLDCT2AD	9HLDCT20	5321304

Certificate of Analysis

Pacific Northwest National Laboratories Sigma V Building Richland, WA 99352

November 28, 2005

Attention: Dot Stewart

SAF Number : I05-053, W05-009, I05-054, A05-013

Date SDG Closed : September 24, 2005

Number of Samples : Twenty (20)
Sample Type : Water
SDG Number : W04769

Data Deliverable : 45-Day / Summary

CASE NARRATIVE

I. Introduction

Between September 20, 2005 and September 23, 2005, twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

STLR ID#	MATRIX	DATE OF RECEIPT
HK1L3	WATER	9/20/05
HK1MJ	WATER	9/20/05
HK69R	WATER	9/22/05
HK692	WATER	9/22/05
HK641	WATER	9/22/05
HK65D	WATER	9/22/05
HK65H	WATER	9/22/05
HK65R	WATER	9/22/05
HK654	WATER	9/22/05
HK66R	WATER	9/22/05
HLDCH	WATER	9/23/05
HLDCJ	WATER	9/23/05
HLDCL	WATER	9/23/05
	HK1L3 HK1MJ HK69R HK692 HK641 HK65D HK65H HK65H HK65R HK654 HK66R HLDCH	HK1L3 WATER HK1MJ WATER HK69R WATER HK692 WATER HK641 WATER HK65D WATER HK65H WATER HK65H WATER HK65R WATER HK66R WATER HK66R WATER HLDCH WATER

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BIDRW4	HLDCM	WATER	9/23/05	
B1DRW8	HLDCN	WATER	9/23/05	
B1DMV7	HLDCP	WATER	9/23/05	
B1DMT9	HLDCT	WATER	9/23/05	
BIDTD2	HLDCC	WATER	9/23/05	
B1DTD7	HLDCF	WATER	9/23/05	
BIDTD8	HLDCG	WATER	9/23/05	

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014 Gross Beta by method RICH-RC-5014 Strontium-90 by method RICH-RC-5006

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017 Iodine-129 (LL) by method RICH-RC-5025

Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065

Tritium by method RICH-RC-5007

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058

Chemical Analysis

Total Coliform by method 9223

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1DRW4) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The achieved MDA for sample B1DT65 was greater than the CRDL due to sample matrix effects; reduced volumes were analyzed based on an elevated screen results. The detected activities exceed the achieved MDAs. The LCS, batch blank, samples and sample duplicate (B1DTH5) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1DTX3) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017:

The LCS, batch blank, samples and sample duplicate (B1DT65) results are within contractual requirements.

Iodine-129 (LL) by method RICH-RC-5025

The LCS, batch blank, samples and sample duplicate (B1DMT9) results are within contractual requirements.

Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1DTD2), and sample matrix spike (B1DTH7) results are within contractual requirements.

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1DRW8) results are within contractual requirements.

Total Uranium

Total Uranium by method RICH-RC-5058:

The first batch for this analysis failed to achieve an acceptable LCS recovery. The batch was reanalyzed with acceptable QC and those results are accepted. The LCS, batch blank, samples, sample duplicate (B1DTY1), and sample matrix spike (B1DTY6) results are within contractual requirements.

Chemical Analysis

Total Coliform by method 9223

The LCS, batch blank, samples and sample duplicate (B1DT65) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Hurs Curry Hans Carman

Project Manager

Drinking Water Method Cross References

	DRINKING WAT	ER ASTM METHOD CROSS REFERENCES
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-2-		
The Gross Beta LCS is prepared with Sr/Y-9	0 (unless otherwise	e specified in the case narrative)

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_n) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

	Report Definitions
Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u _c _Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
Factor CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Le	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D)/[sqrt(TPUs^2 + TPUd^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
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Work Order	The LIMS software assign test specific identifier.

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STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05					Rpt N	br: 30659		File Name: 1	ortdb\e	dd\FeadIV\Rad	\30659.	Edd			
Lab Sample Id: 9HK1L310	Client Id: B1DP28	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	r Sdg Nbr: W04769	QC Type):	Moisture/ Solids%*:	Distilled Volume				Date: 2005 10:31		
Batch	Analyte	CAS#	Result	Unit		TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/T	ïme	Act
5273295	H-3	10028-17-8	2.85E+04	pCi/L	5.7E+02	1.3E+03		3.25E+02	100.0	906.0_H3_LSC	5.00E-03	L	10/29/200	05:16	1
5273293	BETA	12587-47-2	1.79E+03	pCi/L	1.4E+01	2.8E+02		2.04E+00	100.0	9310_ALPHABETA	2.018E-01	L	11/03/200	18:40	1
273298	SR-90	10098-97-2	1.07E+03	pCi/L	7.0E+00	1.7E+02		4.53E-01	78.1	SRISO_SEP_PRE	1.0002E+00	L	11/06/200	12:34	- 1
Lab Sample Id: 9HK1MJ10	Client Id: B1DP85	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	r Sdg Nbr: W04769	QC Type):	Moisture/ Solids%*:	Distilled Volume				ellection Date: 2005 12:16		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/T	ïme	Act
5273295	H-3	10028-17-8	1.73E+04	pCi/L	4.5E+02	8.7E+02		3.26E+02	100.0	906.0_H3_LSC	5.00E-03	L	10/29/200		1
5273267	ALPHA	12587-46-1	9.47E-01	pCi/L	7.1E-01	7.4E-01	U	1.09E+00	100.0	9310_ALPHABETA	2.006E-01	L	11/04/200	17:19	1
5273293	BETA	12587-47-2	6.77E+00	pCi/L	1.2E+00	1.5E+00		1.80E+00	100.0	9310_ALPHABETA	2.019E-01	L	11/03/200	18:40	L
5273300	BE-7	13966-02-4	2.30E+01	pCi/L	2.9E+01	2.9E+01	U	5.74E+01		GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	CO-60	10198-40-0	-7.77E-01	pCi/L	2.9E+00	2.9E+00	U	5.22E+00	1	GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	CS-134	13967-70-9	1.46E-01	pCi/L	2.8E+00	2.8E+00	U	5.19E+00	1	GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	CS-137	10045-97-3	-3.17E+00	pCi/L	2.2E+00	2.2E+00	U	3.07E+00	H	GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	EU-152	14683-23-9	-3.99E-02	pCi/L	5.8E+00	5.8E+00	U	1.04E+01		GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	EU-154	15585-10-1	3.30E+00	pCi/L	7.7E+00	7.7E+00	U	1.59E+01		GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	EU-155	14391-16-3	2.04E+00	pCi/L	4.2E+00	4.2E+00	U	7.74E+00		GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	K-40	13966-00-2	3.33E+01	pCi/L	7.0E+01	7.0E+01	U	5.29E+01		GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	RU-106	13967-48-1	-6.23E-02	pCi/L	2.2E+01	2.2E+01	U	4.08E+01		GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273300	SB-125	14234-35-6	-1.58E+00	pCi/L	6.4E+00	6.4E+00	U	1.12E+01		GAMMALL_GS	1.956E+00	L	11/02/200	15:40	1
5273298	SR-90	10098-97-2	1.56E-01	pCi/L	1.9E-01	2.4E-01	U	5.04E-01	69.7	SRISO_SEP_PRE	1.0004E+00	L	11/06/200	12:34	1
Lab Sample Id: 9HK64110	Client Id: B1DTH7	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	Nbr:	QC Type):	Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2005 13:04		
Batch	Analyte	CAS#	Result				Qual	MDA .	TrcYield	Method	Ala Size	Unit	Analy Date/T	ime	Act
5273266	TC-99	14133-76-7	1.48E+01	pCi/L	5.0E+00	_		1.09E+01		TC99_ETVDSK_LS		L	11/03/200		
Lab Sample Id: 0HK65410	Client Id: B1DT91	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	Nbr:	QC Type	:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2005 11:59		

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.

rptFeadRadSummaryEdd v3.48

R Qual-

11/2	8/2005	10:39:38	AM
11/2	0/2003	10.37.30	CLIVE

STL Richland Report

Lab Code: STLRL

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA 1	FrcYield	Method	Ala Size	Unit	Analy Date/Time	Act
5273266	TC-99	14133-76-7	9.20E+02	pCi/L	1.7E+01	6.0E+01	açua	1.02E+01		TC99_ETVDSK_LS		L	11/03/200 10:17	
Lab Sample Id: 9HK65420	Client Id: B1DT91	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:	· · · · · · · · · · · · · · · · · · ·	1	lection Date: 2005 11:59	***************************************
Batch 5321304	Analyte Uranium	CAS# 7440-61-1	Result 4.80E+00	Unit ug/L	CntU 2S 4.9E-01	TotU 2S 4.9E-01	Qual	MDA 9.36E-02	FrcYield	Method UTOT_KPA	Alq Size 2.24E-02	Unit ML	Analy Date/Time 11/25/200 11:17	Act
Lab Sample Id: 9HK65D10	Client Id: B1DTH0	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	lection Date: 2005 10:06	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA .	rcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5273266	TC-99	14133-76-7	8.10E+01	pCi/L	6.9E+00	1.1E+01		1.13E+01	100.0	TC99_ETVDSK_LS	1.215E-01	L	11/03/200 07:10	1
Lab Sample Id: 9HK65H10	Client Id: B1DTH5	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	lection Date: 2005 08:25	
Batch 5273295	Analyte H-3	CAS# 10028-17-8	Result 2.54E+04	Unit pCi/L	CntU 2S 5.5E+02	TotU 2S 1.2E+03	Qual	MDA 3.29E+02	TrcYield 100.0	Method 906.0_H3_LSC	Alq Size 5.00E-03	Unit L	Analy Date/Time 10/29/200 08:00	Act
5273267	ALPHA	12587-46-1	1.57E+00	pCi/L	8.9E-01	9.4E-01		1.02E+00	100.0	9310_ALPHABETA	1.446E-01	L	11/04/200 17:19	1
5273293	BETA	12587-47-2	4.06E+03	pCi/L	2.3E+01	6.3E+02		2.26E+00	100.0	9310_ALPHABETA	1.696E-01	L	11/03/200 18:40	1
5273266	TC-99	14133-76-7	1.85E+04	pCi/L	7.5E+01	1.1E+03		1.08E+01	100.0	TC99_ETVDSK_LS	1.267E-01	L	11/03/200 08:13	1
Lab Sample Id: 9HK65H20	Client Id: B1DTH5	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	lection Date: 2005 08:25	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA :	IrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5321304	Uranium	7440-61-1	4.65E+00	ug/L	4.8E-01	4.8E-01		8.55E-02		UTOT_KPA	2.45E-02	ML	11/25/200 11:03	1
Lab Sample Id: 9HK65R10	Client Id: B1DTF5	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:	Тур		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		-	lection Date: 2005 09:00	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	IrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5273295	H-3	10028-17-8	2.99E+04	pCi/L	5.9E+02	1.4E+03		3.28E+02	100.0	906.0_H3_LSC	5.00E-03	L	10/29/200 09:21	1
5273266	TC-99	14133-76-7	8.23E+03	pCi/L	5.1E+01	4.9E+02		1.11E+01	100.0	TC99_ETVDSK_LS	1.226E-01	L	11/03/200 09:15	1
Lab Sample Id: 9HK65R20	Client Id:	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		- 1	lection Date: 2005 09:00	

STL Richland

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

11/28/20	05 10:39:38	3 AM			ST	TL Rich	lan	d Repor	rt]	Lab Code: STLRL	
FormNb	r: R	FormatType:	FEAD Vers	ion: 05	Rpt N	br: 30659		File Name:	h:\Reportdb\	edd\FeadIV\Rad\W047	69.Edd, h:\Rep	ortdb\ed	dd\FeadIV\Rad\3065	9.Edd
Batch 5321304	Analyte Uranium	CAS# 7440-61-1	Result 4.63E+00	Unit ug/L	CntU 2S 4.7E-01	TotU 2S 4.7E-01	Qual	MDA 8.88E-02	TrcYield	Method UTOT_KPA	Alq Size 2.36E-02	Unit ML	Analy Date/Time 11/25/200 11:1	A 14
Lab Sample Id: 9HK66R10	Client Id: B1DTX3	Test User	Contract Nbr MW6-SBB-A1	SAF Nt 105-054	or Sdg Nbr: W04769	QC Type	:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2005 10:06	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	A
5273295	H-3	10028-17-8	1.36E+04	pCi/L	4.1E+02	7.2E+02		3.27E+02	2 100.0	906.0_H3_LSC	5.00E-03	L	10/29/200 10:4	13
5273296	I-129L	15046-84-1	7.60E-02	pCi/L	1.4E-01	1.4E-01	U	2.70E-01	102.2	I129LL_SEP_LEPS	3.94E+00	L	11/02/200 12:0)5
5273298	SR-90	10098-97-2	3.16E-03	pCi/L	2.4E-02	2.3E-01	U	5.08E-01	70.5	SRISO_SEP_PRE	1.001E+00	L	11/06/200 12:3	34
Lab Sample Id: 9HK66R20	Client Id: B1DTX3	Test User	Contract Nbr MW6-SBB-A1	SAF No.	or Sdg Nbr: W04769	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	llection Date: 2005 10:06	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	A
5321304	Uranium	7440-61-1	5.88E+00	ug/L	6.0E-01	6.0E-01		7.18E-02		UTOT_KPA	2.92E-02	ML	11/25/200 11:2	20
Lab Sample Id: 9HK69210	Client Id: B1DT57	Test User	Contract Nbr MW6-SBB-A1	SAF N t W05-009	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	llection Date: 2005 08:59	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	A
5273293	BETA	12587-47-2	2.28E+01	pCi/L	2.8E+00	4.8E+00		3.59E+00	100.0	9310_ALPHABETA	1.008E-01	L	11/04/200 15:4	10
5273300	BE-7	13966-02-4	-1.02E+01	pCi/L	2.5E+01	2.5E+01	U	4.22E+01	I	GAMMALL_GS	1.9976E+00	L	11/02/200 15:4	11
5273300	CO-60	10198-40-0	1.32E+00	pCi/L	2.7E+00	2.7E+00	U	5.21E+00)	GAMMALL_GS	1.9976E+00	L	11/02/200 15:4	11
5273300	CS-134	13967-70-9	4.52E-01	pCi/L	2.2E+00	2.2E+00	U	4.13E+00)	GAMMALL_GS	1.9976E+00	L	11/02/200 15:4	11
	CS-137.	10045-97-3	-1.09E-01	pCi/L	2.0E+00	2.0E+00	U	3.58E+00)	GAMMALL_GS	1.9976E+00	L	11/02/200 15:4	11
5273300								4.055.04		CAMMANII CC	4 00705 100		11/02/200 15:4	11
5273300 5273300	EU-152	14683-23-9	3.72E+00	pCi/L	6.0E+00	6.0E+00	U	1.05E+01		GAMMALL_GS	1.9976E+00	L	11/02/200 15.4	+ 1
	EU-152 EU-154	14683-23-9 15585-10-1	3.72E+00 5.27E+00	pCi/L pCi/L	6.0E+00 6.8E+00	6.0E+00 6.8E+00	U	1.05E+01		GAMMALL_GS GAMMALL_GS	1.9976E+00 1.9976E+00		11/02/200 15:4	

Lab Client Sample Id: Id: 9HK69220 B1DT57

K-40

RU-106

SB-125

rptFeadRadSummaryEdd v3.48

TC-99

 Contract Nbr
 SAF Nbr Nbr:
 Sdg Nbr:

 MW6-SBB-A1
 W05-009
 W04769

pCi/L

pCi/L

pCi/L

pCi/L

7.11E+01

2.16E+00

2.92E+00

3.02E+01

13966-00-2

13967-48-1

14234-35-6

14133-76-7

Test

User

QC Moisture/ Type: Solids%*:

U

U

Distilled Volume Sample On Date:

TC99_ETVDSK_LS 1.241E-01

1.9976E+00

1.9976E+00

1.9976E+00

GAMMALL GS

GAMMALL_GS

GAMMALL GS

Collection
Date:

11/02/200 15:41

11/02/200 15:41

11/02/200 15:41

11/03/200 12:22

09/22/2005 08:59

5273300

5273300

5273300

5273266

4.62E+01

3.35E+01

1.02E+01

9.43E+00 100.0

7.2E+01 7.2E+01

1.8E+01 1.8E+01

5.5E+00 5.5E+00

5.1E+00 7.7E+00

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

11/28/2005	10.39.38	AM
11/20/2003	10.37.30	LALES

STL Richland Report

Lab Code: STLRL

Batch 5321304	Analyte Uranium	CAS# 7440-61-1	Result 2.95E+00	Unit ug/L	CntU 2S 3.0E-01	TotU 2S 3.0E-01	Qual	MDA 9.36E-02	TrcYield	Method UTOT KPA	Alq Size 2.24E-02	Unit ML	Analy Date/Time 11/25/200 11:27	Act
Lab Sample Id: 9HK69R10	Client Id: B1DT65	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	r Sdg Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		Col	llection Date: 2005 10:16	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5273293	BETA	12587-47-2	3.78E+01	pCi/L	3.8E+00	6.9E+00		4.66E+00	100.0	9310_ALPHABETA	8.38E-02	L	11/04/200 15:40)
5273300	BE-7	13966-02-4	4.20E+00	pCi/L	2.4E+01	2.4E+01	U	4.50E+01		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40)
5273300	CO-60	10198-40-0	2.27E+00	pCi/L	2.3E+00	2.3E+00	U	5.31E+00		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40)
5273300	CS-134	13967-70-9	1.03E+00	pCi/L	1.8E+00	1.8E+00	U	3.86E+00	1	GAMMALL_GS	1.9828E+00	L	11/02/200 15:40)
5273300	CS-137	10045-97-3	-2.89E-02	pCi/L	2.1E+00	2.1E+00	U	3.86E+00		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40) 1
5273300	EU-152	14683-23-9	1.88E+00	pCi/L	4.9E+00	4.9E+00	U	9.23E+00		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40	0 1
5273300	EU-154	15585-10-1	4.30E-01	pCi/L	4.8E+00	4.8E+00	U	1.03E+01		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40	0 1
5273300	EU-155	14391-16-3	1.48E+00	pCi/L	3.4E+00	3.4E+00	U	6.38E+00		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40	0 1
5273300	K-40	13966-00-2	2.60E+01	pCi/L	3.3E+01	3.3E+01	U	7.52E+01		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40	0 1
5273300	RU-106	13967-48-1	-1.02E+01	pCi/L	1.8E+01	1.8E+01	U	3.08E+01		GAMMALL GS	1.9828E+00	L	11/02/200 15:40	0 1
5273300	SB-125	14234-35-6	3.00E+00	pCi/L	4.6E+00	4.6E+00	U	9.11E+00		GAMMALL_GS	1.9828E+00	L	11/02/200 15:40	0 1
5273266	TC-99	14133-76-7	7.99E+01	pCi/L	6.6E+00	1.1E+01		1.07E+01	100.0	TC99_ETVDSK_LS	1.244E-01	L	11/03/200 11:20)
Lab Sample Id: 9HK69R20	Client Id: B1DT65	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	llection Date: 2005 10:16	
Batch	Analyte	CAS#	Result			TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5321304	Uranium	7440-61-1	3.20E+00	ug/L	3.3E-01	3.3E-01		7.70E-02		UTOT_KPA	2.72E-02	ML	11/25/200 11:24	4 1
Lab Sample Id: 9HLDCC10		Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		-	llection Date: 2005 12:03	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5273295	H-3	10028-17-8	2.18E+04	pCi/L	5.1E+02	1.1E+03		3.28E+02	100.0	906.0_H3_LSC	5.00E-03	L	10/29/200 12:0	5 1
5273266	TC-99	14133-76-7	7.04E+01	pCi/L	6.4E+00	1.0E+01		1.08E+01	100.0	TC99_ETVDSK_LS	1.259E-01	L	11/03/200 13:2	5 I
Lab Sample Id: 9HLDCC20		Test User	Contract Nbr MW6-SBB-A1	SAF N b	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	llection Date: 2005 12:03	
Batch	Analyte	CAS#	Result			TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
				ug/L		2.6E-01		8.77E-02		UTOT_KPA			11/25/200 11:3	0 1

STL Richland

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J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

11/28/2005 10:39:38 AM

STL Richland Report

Lab Code: STLRL

Version: 05 Rpt Nbr: 30659 File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd FormatType: FEAD FormNbr: R QC Collection Lab Client Test Contract SAF Nbr Sda Moisture/ Distilled Sample Nbr Nbr: Type: Solids%*: Volume On Date: Date: Sample Id: ld: User 09/23/2005 08:45 9HLDCF10 B1DTD7 MW6-SBB-A1 W05-009 W04769 TrcYield CntU 2S TotU 2S Qual MDA Method Alq Size **Analy Date/Time** Act Batch Analyte CAS# Result Unit Unit 1.0E+01 2.2E+01 5273266 TC-99 14133-76-7 2.77E+02 pCi/L 1.06E+01 100.0 TC99 ETVDSK LS 1.259E-01 11/03/200 15:29 QC Distilled Sample Collection Lab Client Test Contract SAF Nbr Sda Moisture/ Solids%*: Volume On Date: Date: Nbr: Type: Sample Id: ld: User Nbr W04769 09/23/2005 08:45 9HLDCF20 B1DTD7 MW6-SBB-A1 W05-009 **TrcYield** Method Alq Size Analy Date/Time Act CAS# Result Unit CntU 2S TotU 2S Qual MDA Unit Batch Analyte 6.6E-01 8.19E-02 UTOT KPA 2.56E-02 ML 11/25/200 11:33 5321304 Uranium 7440-61-1 6.43E+00 ug/L 6.6E-01 QC Moisture/ Distilled Sample Collection Lab Client Contract SAF Nbr Sdg Test Solids%*: On Date: Date: Sample Id: ld: User Nbr Nbr: Type: Volume 9HLDCG10 B1DTD8 MW6-SBB-A1 W05-009 W04769 09/23/2005 07:15 **TrcYield** Method Analy Date/Time Batch Analyte CAS# Result Unit CntU 2S TotU 2S Qual MDA Ala Size Unit Act 14133-76-7 -6.72E-01 pCi/L 4.5E+00 6.1E+00 1.10E+01 100.0 TC99 ETVDSK LS 1.25E-01 11/03/200 17:34 5273266 TC-99 QC Distilled Collection Lab Client Test Contract SAF Nbr Sda Moisture/ Sample Nbr Nbr: Type: Solids%*: Volume On Date: Date: Sample Id: ld: User W04769 09/23/2005 07:15 9HLDCG20 B1DTD8 MW6-SBB-A1 W05-009 CAS# Unit CntU 2S TotU 2S Qual MDA TrcYield Method Alq Size Unit Analy Date/Time Act Batch Analyte Result 2.60E-02 11/25/200 11:36 5321304 7440-61-1 -1.69E-02 ug/L 2.1E-03 2.1E-03 U 8.06E-02 UTOT KPA Uranium QC Distilled Sample Collection Lab Client Test Contract SAF Nbr Sdg Moisture/ On Date: Date: Sample Id: Id: User Nbr Nbr: Type: Solids%*: Volume 9HLDCH10 B1DTY1 W04769 09/23/2005 12:56 MW6-SBB-A1 105-054 **TrcYield** Method Act CAS# CntU 2S TotU 2S Qual MDA Alg Size Unit Analy Date/Time Batch **Analyte** Result Unit 906.0 H3 LSC 10028-17-8 3.35E+04 pCi/L 6.2E+02 1.5E+03 3.28E+02 100.0 5.00E-03 10/29/200 13:26 5273295 H-3 1.2E-01 1.2E-01 U 2,49E-01 102.7 1129LL SEP LEPS 3.9033E+00 11/02/200 12:06 5273296 I-129L 15046-84-1 1.16E-01 pCi/L 2.2E-01 U 4.74E-01 72.5 SRISO SEP PRE 1.0005E+00 12:29 5273298 SR-90 10098-97-2 6.53E-02 pCi/L 2.0E-01 11/06/200 5273266 TC-99 14133-76-7 3.66E+02 pCi/L 1.1E+01 2.7E+01 9.32E+00 100.0 TC99 ETVDSK LS 1.275E-01 11/03/200 18:36 Contract SAF Nbr Sda QC Moisture/ Distilled Sample Collection Lab Client Test Sample Id: Id: User Nbr Nbr: Type: Solids%*: Volume On Date: Date: 09/23/2005 12:56 9HLDCH20 B1DTY1 W04769 MW6-SBB-A1 105-054 Qual MDA **TrcYield** Method Alq Size Analy Date/Time Act Batch Analyte CAS# Result Unit CntU 2S TotU 2S Unit 4.60E+00 4.7E-01 4.7E-01 8.62E-02 UTOT KPA 2.43E-02 ML 11/25/200 12:46 5321304 Uranium 7440-61-1 ug/L

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Oual- Analyte was found in the associated laboratory blank above the MDC.

rptFeadRadSummaryEdd v3.48

11/28/20	05 10:39:3	8 AM			S	TL Rich	ılan	d Repor	rt				Lab Code: STLF	RL	
FormNb	r: R	FormatType:	FEAD Vers	ion: 05	Rpt N	lbr: 30659		File Name:	h:\Reportdb\e	edd\FeadIV\Rad\W047	'69.Edd, h:\Rep	ortdb\e	dd\FeadIV\Rad\3	0659.E	Edd
Lab Sample Id: 9HLDCJ10	Client Id: B1DTY6	Test	Contract Nbr MW6-SBB-A1	SAF Nb	or Sdg Nbr: W0476			Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2005 10:21		
Batch 5273295	Analyte H-3	CAS# 10028-17-8	Result 2.95E+04	Unit pCi/L	CntU 2S 5.9E+02	TotU 2S 1.4E+03	Qua	MDA 3.32E+02	TrcYield 2 100.0	Method 906.0_H3_LSC	Alq Size 5.00E-03	Unit L	Analy Date/Tim 10/29/200 1		Act
5273296	I-129L	15046-84-1	2.24E-01	pCi/L	1.6E-01	1.6E-01	U	3.38E-01	101.4	I129LL_SEP_LEPS	3.9226E+00	L	11/02/200 1	13:49	1
5273298	SR-90	10098-97-2	-9.65E-01	pCi/L	6.9E-01	7.4E-01	U	1.85E+00	72.8	SRISO_SEP_PRE	2.80E-01	L	11/06/200 1	12:30	- 1
5273266	TC-99	14133-76-7	1.28E+04	pCi/L	6.3E+01	7.6E+02		1.11E+01	100.0	TC99_ETVDSK_LS	1.237E-01	L	11/03/200 1	19:39	1
Lab Sample Id: 9HLDCJ30	Client Id: B1DTY6	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	or Sdg Nbr: W0476	Туре		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2005 10:21		
Batch 5321304	Analyte Uranium	CAS# 7440-61-1	Result 1.55E+00	Unit ug/L	CntU 2S 1.6E-01	TotU 2S 1.6E-01	Qua	MDA 8.77E-02	TrcYield	Method UTOT_KPA	Alq Size 2.39E-02	Unit ML	Analy Date/Tim 11/25/200 1		Act
Lab Sample Id: 9HLDCL10	Client Id: B1DTC4	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:			Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Çe		llection Date: 2005 12:56		
Batch 5273266	Analyte TC-99	CAS# 14133-76-7	Result 2.06E+00	Unit pCi/L	CntU 2S 4.6E+00	TotU 2S 6.3E+00	Qual	MDA 1.09E+01	TrcYield 100.0	Method TC99_ETVDSK_LS	Alq Size 1.256E-01	Unit L	Analy Date/Tim 11/03/200 2		Act
Lab Sample Id: 9HLDCL20	Client Id: B1DTC4	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:			Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	llection Date: 2005 12:56		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Tim	ne	Act
5321304	Uranium	7440-61-1	4.76E+00	ug/L	4.9E-01	4.9E-01		7.82E-02		UTOT_KPA	2.68E-02	ML	11/25/200 1	13:00	I
Lab Sample Id: 9HLDCM10	Client Id: B1DRW4	Test User	Contract Nbr MW6-SBB-A1	SAF Nb W05-009	Nbr:			Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2005 10:50		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Tim	ne	Act
5273295	H-3	10028-17-8	2.19E+01	pCi/L	1.4E+02	1.5E+02	U	3.30E+02		906.0_H3_LSC	5.00E-03	L	10/29/200 2		- 1
5273267	ALPHA	12587-46-1	1.41E+00	pCi/L	8.1E-01	8.6E-01		1.01E+00		9310_ALPHABETA		L	11/04/200 1		1
5273293	BETA	12587-47-2	5.03E+00	pCi/L	1.7E+00	1.9E+00		2.95E+00	100.0	9310_ALPHABETA	1.32E-01	L	11/04/200 1	15:40	1
Lab	Client	Test	Contract	SAF Nb	r Sdg	QC		Moisture/	Distilled	Sample		Co	llection		

Sample Id:

Batch

9HLDCN10 B1DRW8

ld:

Analyte

H-3

MDA

Solids%*:

Type:

Qual

U

TotU 2S

Volume

TrcYield

3.30E+02 100.0

On Date:

Alq Size

5.00E-03

Method

906.0_H3_LSC

Nbr

Result

-1.06E+02

MW6-SBB-A1 W05-009

Unit

Nbr:

W04769

pCi/L 1.3E+02 1.4E+02

CntU 2S

User

10028-17-8

CAS#

Act

Date:

09/23/2005 08:59

Unit

Analy Date/Time

10/29/200 21:36

⁵²⁷³²⁹⁵ STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

rptFeadRadSummaryEdd v3.48 B Qual- Analyte was found in the associated laboratory blank above the MDC.

11/28/20	05 10:39:38	3 AM			SI	L Rich	ılar	id Repor	t	,		1	Lab Code: ST	LRL	
FormNbr	r: R	FormatType:	FEAD Vers	ion: 05	Rpt N	br: 30659		File Name: h	:\Reportdb\	edd\FeadIV\Rad\W047	69.Edd, h:\Re	portdb\ed	ld\FeadIV\Rad	\30659.E	Edd
5273267	ALPHA	12587-46-1	8.87E-01	pCi/L	6.5E-01	6.8E-01	U	9.83E-01	100.0	9310_ALPHABETA	1.994E-01	L	11/04/200	17:19	1
5273293	BETA	12587-47-2	5.84E+00	pCi/L	1.2E+00	1.5E+00		1.94E+00	100.0	9310_ALPHABETA	1.94E-01	L	11/04/200	15:40	1
Lab Sample Id: 9HLDCP10	Client Id: B1DMV7	Test User	Contract Nbr MW6-SBB-A1	SAF Nb A05-013	or Sdg Nbr: W04769	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	llection Date: 2005 10:50		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/1	ime	Act
5273296	I-129L	15046-84-1	-7.11E-02	pCi/L	1.4E-01	1.4E-01	U	2.49E-01	103.0	I129LL_SEP_LEPS	3.90E+00	L	11/02/200	13:50	1
5273266	TC-99	14133-76-7	5.51E+00	pCi/L	4.7E+00	6.5E+00	U	1.08E+01	100.0	TC99_ETVDSK_LS	1.253E-01	L	11/03/200	21:43	1
Lab Sample Id: 9HLDCP20	Client Id: B1DMV7	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	or Sdg Nbr: W04769	QC Type		Moisture/ Solids%*:	Distilled Volume			1	llection Date: 2005 10:50		
Batch	Analyte	CAS#	Result		CntU 2S	TotU 2S	Qua	MDA .	TrcYield	Method	Alq Size	Unit	Analy Date/1	ime	Act
5321304	Uranium	7440-61-1	6.15E-01	ug/L	6.8E-02	6.8E-02		8.96E-02		UTOT_KPA	2.34E-02	ML	11/25/200	13:03	1
Lab Sample Id: 9HLDCT10	Client Id: B1DMT9	Test User	Contract Nbr MW6-SBB-A1	SAF N b	or Sdg Nbr: W04769	QC Тур		Moisture/ Solids%*:	Distilled Volume				llection Date: 2005 08:59		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/1	ime	Act
5273296	I-129L	15046-84-1	6.60E-02	pCi/L	1.4E-01	1.4E-01	U	2.65E-01	103.5	I129LL_SEP_LEPS	3.90E+00	L	11/02/200	15:50	1
5273266	TC-99	14133-76-7	-1.59E+00	pCi/L	4.3E+00	6.0E+00	U	1.02E+01	100.0	TC99_ETVDSK_LS	1.252E-01	L	11/03/200	22:46	- 1
Lab Sample Id: 9HLDCT20	Client Id: B1DMT9	Test User	Contract Nbr MW6-SBB-A1	SAF NE A05-013	or Sdg Nbr: W04769	QC Type		Moisture/ Solids%*:	Distilled Volume				llection Date: 2005 08:59		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/I	ime	Act
5321304	Uranium	7440-61-1	1.10E+00	ug/L	1.1E-01	1.1E-01		8.19E-02		UTOT_KPA	2.56E-02	ML	11/25/200	.13:06	-

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.

rptFeadRadSummaryEdd v3.48

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\W04769.Edd, h:\Reportdb\edd\Fead\V\Rad\30659.Edd

Lab Sample Id:

HLQ001AB

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 12:03

Client ld:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BLK

Received Date: 09/23/2005

SAF Nbr **Contract Nbr Test User** Case Nbr SAS Nbr Suffix Decant **Distilled Volume** File Id FSuffix RTyp MW6-SBB-A19981 BS H RER/ LCS Tot/Cnt Tracer Spk Conc/ Analy Aliq Date/Time RPD/ Batch #/ Analyt/ Result/ Qu-LCL/UCL Typ MDC Yield %Rec Method Size/ Analyzed UCL UCL Qc Type CAS# Orig Rst Unit **Uncert 2S** al D pCi/L 6.0E+00 U 1.05E+01 100.0 TC99 ETVDSK 1.29E-01 11/03/2005 5273266 TC-99 -1.19E-02 4.4E+00 23:48 BLK 14133-76-7

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ1F1AB

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 10:50

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BLK

Received Date:

09/23/2005

SAF		Contract Nbr V6-SBB-A19981	Т	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix R	Гур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5273267	ALPHA	1.12E-02	pCi/L	2.4E-01	U	6.60E-01	100.0		9310_ALPHAE	2.032E-01	11/04/2005				D
BLK	12587-46-1			2.4E-01						L	20:18				

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ311AB

Orig Rst

3.70E+01

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

09/23/2005

File Id

Moisture/Solids%*:

CAS#

QC Type: Case Nbr

BLK

Decant

Received Date:

SAF Nbr **Contract Nbr Test User** MW6-SBB-A19981 Analyt/ Result/

Tot/Cnt Unit **Uncert 2S**

Qual pCi/L 1.5E+02 U

Tracer MDC Yield 3.24E+02

SAS Nbr

Spk Conc/ %Rec

Suffix

Analy Method 906.0 H3 LSC

Aliq Size/ 5.00E-03

Date/Time RPD/ UCL Analyzed 10/29/2005

RER/ UCL

LCS R LCL/UCL Typ

FSuffix RTyp

H

5273295 H-3 BLK 10028-17-8

Batch #/

Qc Type

1.4E+02

100.0

Distilled Volume

02:33

D

BW

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\V\04769.Edd, h:\Reportdb\edd\Fead\V\Rad\\30659.Edd

Lab Sample Id:

HLQ311DX

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Received Date:

Moisture/Solids%*:

QC Type:

BLK

09/23/2005

SAF		ontract Nbr 6-SBB-A19981	1	Test User	Case	Nbr \$	SAS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R1	Гур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5273295	H-3	7.70E+01	pCi/L	1.5E+02	U	3.28E+0	2 100.0		906.0_H3_LS0	5.00E-03	10/29/2005				D
BLK	10028-17-8			1.4E+02						L	17:31				

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ3R1AB

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 08:25

Client Id:

NA

Contract Nbr

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

12587-47-2

QC Type:

BLK

Received Date:

09/22/2005

SAF Nbr

MW6-SBB-A19981

Test User

Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp

Analyt/ Batch #/ CAS# Qc Type 5273293 BETA

BLK

Result/ **Orig Rst** 2.08E+00

Tot/Cnt Unit **Uncert 2S** pCi/L 1.0E+00 9.7E-01

Qu-Tracer MDC Yield al 1.75E+00 100.0

Spk Conc/ %Rec

Analy Method 9310 ALPHAB

Aliq Size/ 1.909E-01

Date/Time Analyzed 11/04/2005 RPD/ UCL

LCS RER/ UCL LCL/UCL Typ D

CA

H

R

L 15:40

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\V\04769.Edd, h:\Reportdb\edd\Fead\V\Rad\\030659.Edd

Lab Sample Id:

HLQ4E1AB

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

NA

Contract Nbr

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

I-129L

15046-84-1

QC Type:

BLK

Received Date:

09/23/2005

SAF Nbr

5273296

BLK

MW6-SBB-A19981

Test User

Case Nbr

SAS Nbr

Suffix

Distilled Volume Decant

File Id

FSuffix RTyp

Batch #/ Analyt/ Qc Type CAS#

Result/ **Orig Rst** -5.98E-02

Tot/Cnt Unit Uncert 2S pCi/L 1.5E-01

Qual U 1.5E-01

MDC 2.55E-01

Tracer Yield 99.5

Spk Conc/ %Rec

Analy Method 1129LL SEP L

Aliq Size/

Date/Time 3.8353E+00 11/02/2005

Analyzed

RPD/ RER/ UCL UCL

LCS R LCL/UCL Typ

H

D

CC

17:50

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ4K1AB

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 10:06

Client Id:

NA

Matrix: QC Type: WATER

WATER

Sample On Date:

Received Date:

09/22/2005

SAF Nbr

Contract Nbr **Test User** MW6-SBB-A19981

Case Nbr

Suffix

BLK

SAS Nbr

Decant

Distilled Volume

File Id

FSuffix RTyp CE H

R

Batch #/ Analyt/ CAS# Qc Type 5273298 SR-90 10098-97-2 BLK

Result/ **Orig Rst** -5.83E-02

Tot/Cnt **Uncert 2S** Unit pCi/L 2.4E-01 2.2E-01

Qu-

al MDC 66.6 5.57E-01

Tracer Yield

Spk Conc/ Analy %Rec Method

SRISO SEP P

Alia Date/Time Size/ Analyzed 1.00E+00 11/06/2005 L

RPD/ UCL

RER/ LCS UCL LCL/UCL Typ D

12:30

STL Richland OC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

Test User

pCi/L 2.6E+01

pCi/L 2.6E+00

pCi/L 2.5E+00

pCi/L 2.1E+00

pCi/L 5.5E+00

pCi/L 6.7E+00

pCi/L 5.5E+00

pCi/L 6.4E+01

pCi/L 1.8E+01

pCi/L 5.2E+00

Unit

Tot/Cnt

Uncert 2S

2.6E+01

2.6E+00

2.5E+00

2.1E+00

5.5E+00

6.7E+00

5.5E+00

6.4E+01

1.8E+01

5.2E+00

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ4M1AB

Sdg/Rept Nbr: W04769

MDC

5.10E+01

4.17E+00

4.23E+00

3.88E+00

9.73E+00

1.37E+01

9.47E+00

1.38E+02

3.27E+01

9.22E+00

SAS Nbr

30659

Collection Date: 09/22/2005 10:16

Client Id:

SAF Nbr

Batch #/

Qc Type 5273300

BLK

5273300

BLK

BLK

BLK

BLK

BLK

BLK

BLK

BLK 5273300

BLK

5273300 CS-134

5273300 CS-137

5273300 EU-152

5273300 EU-154

5273300 EU-155

5273300 RU-106

5273300 K-40

NA

Contract Nbr

MW6-SBB-A19981

Result/

Orig Rst

3.26E+01

-2.13E+00

-1.41E+00

1.80E-01

3.21E+00

5.29E+00

5.65E-01

-4.85E+00

3.02E+00

-5.43E-01

Matrix:

WATER

WATER

Sample On Date:

Received Date:

09/22/2005

Moisture/Solids%*:

Analyt/

CAS#

13966-02-4 CO-60

10198-40-0

13967-70-9

10045-97-3

14683-23-9

15585-10-1

14391-16-3

13966-00-2

13967-48-1

14234-35-6

SB-125

BE-7

QC Type:

Qu-

al

U

U

U

U

U

U

U

U

U

Case Nbr

BLK

Nbr	Suffix	Decant D	istilled Volume	File	e Id		FSuffix RTyp CG H
Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS R LCL/UCL Typ
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00 L	11/02/2005 19:20			D
		GAMMALL_GS	1.9943E+00	11/02/2005			D

L

19:20

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

Monday, November 28, 2005 STL Richland QC Blank Report

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\\Fead\\V\Rad\\W04769.Edd, h:\Reportdb\edd\\Fead\\V\Rad\\W04769.Edd

Lab Sample Id: HQEMX1AB Sdg/Rept Nbr: W04769 30659 Collection Date: 09/22/2005 08:25

Client Id: NA Matrix: WATER WATER Sample On Date:

Moisture/Solids%*: QC Type: BLK Received Date: 09/22/2005

SAF Nbr **Contract Nbr Test User** Case Nbr SAS Nbr Suffix Decant **Distilled Volume** File Id FSuffix RTyp MW6-SBB-A19981 CI H Analyt/ Tracer Spk Conc/ LCS Batch #/ Result/ Tot/Cnt Qu-Analy Aliq Date/Time RPD/ RER/ R Qc Type CAS# **Orig Rst** Unit **Uncert 2S** al MDC Yield %Rec Method Size/ Analyzed UCL UCL LCL/UCL Typ -1.00E-02 ug/L D 5321304 Uranium 1.7E-03 6.87E-02 UTOT KPA 3.05E-02 11/25/2005 7440-61-1 1.7E-03 ML BLK 10:50

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\V\04769.Edd, h:\Reportdb\edd\Fead\V\Rad\\30659.Edd

Lab Sample Id:

HLQ311CS

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Received Date:

Moisture/Solids%*:

QC Type:

BS

09/23/2005

SAF		ntract Nbr 6-SBB-A19981	1	est User	Case	Nbr S	AS Nbr	Suffix	Decant I	Distilled Volume	File	e ld		FSuffix R BX	₹Тур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
5273295	H-3	2.51E+03	pCi/L	2.6E+02		3.28E+02	100.0	2.81E+03	906.0_H3_LSC	5.00E-03	10/29/2005			70	D
BS	10028-17-8			2.1E+02				89.4		L	03:54			130	

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ311EM

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

09/23/2005

SAF		Contract Nbr W6-SBB-A19981	Т	est User	Case	Nbr SA	S Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix F BZ	RТур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
5273295		2.85E+03	pCi/L	2.7E+02		3.29E+02	100.0	2.81E+03	906.0_H3_LSC	5.00E-03	10/29/2005			70	D
BS	10028-17-8	}		2.2E+02				101.6		L	18:53			130	

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

Test User

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\W04769.Edd, h:\Reportdb\edd\Fead\V\Rad\30659.Edd

Lab Sample Id:

HLQ3R1CS

Sdg/Rept Nbr: W04769

SAS Nbr

30659

Collection Date: 09/22/2005 08:25

Client Id:

SAF Nbr

NA

Contract Nbr

MW6-SBB-A19981

Matrix:

WATER

WATER

Sample On Date:

Received Date:

09/22/2005

Moisture/Solids%*:

QC Type: Case Nbr

BS

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp CB H

R

D

Batch #/ Qc Type 5273293 BETA

BS

Analyt/ CAS# 12587-47-2

Result **Orig Rst** 2.31E+01

Unit pCi/L 4.0E+00 1.7E+00

Tot/Cnt **Uncert 2S**

Qu-MDC al 1.76E+00 100.0

Tracer Spk Conc/ Yield %Rec 2.32E+01 99.6

Analy Method 9310 ALPHAB

Aliq Size/ 1.952E-01

Date/Time Analyzed 11/04/2005 15:40

RPD/ RER/ UCL UCL

LCS LCL/UCL Typ 70

130

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ4E1CS

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

09/23/2005

SAF Nbr

Contract Nbr MW6-SBB-A19981

Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp CD

H

D

R

Batch #/ Qc Type 5273296 I-129L

BS

Analyt/ CAS# 15046-84-1

Result/ **Orig Rst** 8.58E+00

Tot/Cnt Unit Uncert 2S pCi/L 1.1E+00 1.1E+00

Test User

Qual MDC 3.59E-01

Tracer Yield 100.8

Spk Conc/ %Rec 9.63E+00 89.2

Analy Method 1129LL_SEP_L

Aliq Size/ 4.00E+00

Analyzed 11/02/2005 17:50

Date/Time UCL

LCS RPD/ RER/ LCL/UCL Typ UCL 70

130

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\V\04769.Edd, h:\Reportdb\edd\Fead\V\Rad\30659.Edd

Lab Sample Id:

HLQ4K1CS

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 10:06

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

09/22/2005

SAF Nbr

Contract Nbr MW6-SBB-A19981 **Test User** Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp CF H

R

Batch # / Qc Type 5273298

BS

Analyt/ CAS# **SR-90** 10098-97-2

Result/ Orig Rst 1.48E+01

Tot/Cnt **Uncert 2S** Unit 2.4E+00 pCi/L 9.3E-01

Qual MDC 5.43E-01

Tracer Yield 66.2 109.3

Spk Conc/ %Rec 1.35E+01

Analy Method SRISO_SEP_P

Aliq Size/ 1.00E+00

Date/Time Analyzed UCL 11/06/2005 12:30

LCS RPD/ RER/ UCL

LCL/UCL Typ 70 D 130

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLQ4M1CS

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 10:16

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

09/22/2005

SAF		ontract Nbr 6-SBB-A19981	1	est User	Case	Nbr SA	S Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix R	РЕТУ Р
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
5273300 BS	CO-60 10198-40-0	3.90E+01	pCi/L	9.4E+00 9.4E+00		4.72E+00		3.78E+01 103.0	GAMMALL_G	S 1.9627E+00 L	11/02/2005 15:42			70 130	D
5273300 BS	CS-137 10045-97-3	2.72E+01	pCi/L	6.7E+00 6.7E+00		5.50E+00		2.53E+01 107.6	GAMMALL_G	S 1.9627E+00 L	11/02/2005 15:42			70 130	D
5273300 BS	EU-152 14683-23-9	8.56E+01	pCi/L	1.9E+01 1.9E+01	U	2.81E+01		7.74E+01 110.6	GAMMALL_G	S 1.9627E+00 L	11/02/2005 15:42			70 130	D

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HQEMX1CS

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 08:25

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

09/22/2005

SAF		ontract Nbr /6-SBB-A19981	1	est User	Case	Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix CJ	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/U	R CL Typ
5321304 BS	Uranium 7440-61-1	3.70E+01	ug/L	4.4E+00 4.4E+00		8.70E-0	2	3.75E+01 98.5	UTOT_KPA	2.41E-02 ML	11/25/2005 10:56			70 130	D

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\V\04769.Edd, h:\Reportdb\edd\Fead\V\Rad\30659.Edd

Lab Sample Id:

HQEMX1DS

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 08:25

Client Id:

NA

Matrix:

QC Type:

WATER

BS

Tracer

Yield

WATER

Sample On Date:

Received Date: 09/22/2005

SAF Nbr

Contract Nbr MW6-SBB-A19981

Test User Case Nbr SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp CK

H

R

Batch #/

Qc Type

5321304

BS

Analyt/ CAS# Uranium 7440-61-1

Result/ **Orig Rst** 2.99E+00

Tot/Cnt Unit **Uncert 2S** 3.1E-01 ug/L 3.1E-01

Qual MDC 6.85E-02

Spk Conc/ %Rec 2.99E+00 99.9

Analy Method UTOT KPA

Aliq Size/ 3.06E-02 ML

Date/Time Analyzed 11/25/2005 10:59

RER/ RPD/ UCL UCL

LCS LCL/UCL Typ 70 D 130

STL Richland

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\X0659.Edd

Lab Sample Id:

HK65H1GR

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 08:25

Client Id:

B1DTH5

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

DUP

Received Date: 09/22/2005

SAF I W05-0		ontract Nbr /6-SBB-A19981	Т	est User	Case	Nbr S/	AS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R BJ	Тур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCI	R Typ
5273293 DUP	BETA 12587-47-2	3.88E+03 4.06E+03	pCi/L	7.5E+02 2.1E+01		2.08E+00	100.0		9310_ALPHAE	B 1.70E-01 L	11/03/2005 18:40	4.5 20.0	0.3		D

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HK66R1FR

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 10:06

12:29

Client Id:

DUP

B1DTX3

3.16E-03

Matrix:

QC Type:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

10098-97-2

1.7E-01

DUP

Received Date: 09/22/2005

20.0

3

SAF N 105-05		Contract Nbr MW6-SBB-A19981		Test User		Nbr S.	AS Nbr	Suffix	Decant Di	stilled Volume	File Id		FSuffix RTyp BK H		
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R L Typ
5273298	SR-90	-1.17E-01	pCi/L	1.8E-01	U	4.44E-01	77.7		SRISO_SEP_P	1.00E+00	11/06/2005	0.0	0.9		D

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\V\04769.Edd, h:\Reportdb\edd\Fead\V\Rad\V\030659.Edd

Lab Sample Id:

HLDCC1ER

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 12:03

Client Id:

B1DTD2

Matrix:

WATER

WATER

Sample On Date:

Received Date:

09/23/2005

Moisture/Solids%*:

QC Type:

DUP

Suffix

Decant **Distilled Volume**

FSuffix RTyp

H

SAF Nbr W05-009

MW6-SBB-A19981

Contract Nbr

Case Nbr

SAS Nbr

Aliq

Date/Time Analyzed

RPD/ RER/ UCL

LCS

Batch #/ Analyt/ Qc Type 5273266 TC-99 DUP

CAS# 14133-76-7

Result/ **Orig Rst** 5.54E+01 7.04E+01

Tot/Cnt Unit **Uncert 2S** pCi/L 9.2E+00 5.8E+00

Test User

al

Qu-Tracer MDC 9.83E+00 100.0

Yield

Spk Conc/ %Rec

Analy Method TC99 ETVDSK 1.261E-01

Size/

11/03/2005

UCL 23.9 2.3

LCL/UCL Typ D

BM

14:27 20.0 3

File Id

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLDCH2GR

30659

Collection Date: 09/23/2005 12:56

Client Id:

B1DTY1

Matrix:

Sdg/Rept Nbr: W04769 WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

DUP

Received Date: 09/23/2005

SAF I 105-05		ontract Nbr 6-SBB-A19981	Т	est User	Case	Nbr :	SAS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix F BN	Р Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
5321304 DUP	Uranium 7440-61-1	4.60E+00 4.60E+00	ug/L	4.7E-01 4.7E-01		8.42E-02	2		UTOT_KPA	2.49E-02 ML	11/25/2005 12:50	.0 20.0	0. 3		D

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLDCN1ER

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

B1DRW8

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

DUP

Received Date:

09/23/2005

	SAF	Nbr Cor	tract Nbr	T	est User	Case	Nbr S/	AS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R	Тур
	W05-0	009 MW6	-SBB-A19981												BQ	Н
	atch # / c Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
52	273295	H-3	2.48E+01	pCi/L	1.5E+02	U	3.30E+02	100.0		906.0_H3_LS0	5.00E-03	10/29/2005	0.0	1.2		D
	DUP	10028-17-8	-1.06E+02		1.4E+02						L	22:17	20.0	3		

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\V04769.Edd, h:\Reportdb\edd\FeadIV\Rad\V04769.Edd

Lab Sample Id:

HLDCT1ER

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 08:59

Client Id:

B₁DMT9

Matrix:

QC Type:

WATER

WATER

Sample On Date:

09/23/2005 Received Date:

SAF Nbr

Contract Nbr

Test User Case Nbr SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp BR

H

A05-013

MW6-SBB-A19981

Tot/Cnt **Uncert 2S**

Qu-

al

U

MDC

Spk Conc/ Tracer Yield

DUP

Analy Method

Aliq Size/

Date/Time Analyzed

RPD/ RER/ UCL UCL 1.1

LCS R

Batch #/ Analyt/ Qc Type CAS# 5273296 I-129L DUP 15046-84-1

Orig Rst -2.38E-02 6.60E-02

Result/

pCi/L 1.2E-01 1.2E-01

Unit

2.20E-01 103.5 %Rec 1129LL SEP L

3.8161E+00 11/02/2005

425.8 3 LCL/UCL Typ D

15:50 20.0

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HK6411CW

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/22/2005 13:04

Client Id:

B1DTH7

Matrix: WATER

Sample On Date:

WATER

Moisture/Solids%*:

Analyt/

CAS#

QC Type:

MS

Received Date:

09/22/2005

SAF Nbr

Contract Nbr

Case Nbr

Qu-

al

SAS Nbr

Suffix Decant

Distilled Volume

File Id

FSuffix RTyp BI

W05-009

Batch #/

Qc Type

MW6-SBB-A19981

Unit

Tot/Cnt Uncert 2S

Tracer Yield

Spk Conc/ %Rec 3.61E+03

Analy Method Aliq Date/Time Size/ Analyzed 11/03/2005 RPD/ RER/ UCL UCL

LCS R LCL/UCL Typ 60 D

H

5273266 TC-99 14133-76-7 MS

3.08E+03

Result/

Orig Rst

pCi/L 1.9E+02 3.1E+01

Test User

1.10E+01 100.0

MDC

85.3

TC99 ETVDSK 1.248E-01

06:08

140

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04769.Edd, h:\Reportdb\edd\FeadIV\Rad\30659.Edd

Lab Sample Id:

HLDCJ3GW

Sdg/Rept Nbr: W04769

30659

Collection Date: 09/23/2005 10:21

Client ld:

B1DTY6

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

MS

Received Date:

09/23/2005

SAF 105-05		ontract Nbr 6-SBB-A19981	1	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix F	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCL/UC	R L Typ
5321304 MS	Uranium 7440-61-1	3.82E+01	ug/L	4.7E+00 4.7E+00		9.11E-02		3.92E+01 97.5	UTOT_KPA	2.30E-02 ML	11/25/2005 12:56			60 140	D

RQC050

Severn Trent Laboratories, Inc. WET CHEM BATCHSHEET

Run Date: 11/22/05 Time: 11:27:01

STL Richland

PRODUCTION FIGURES - WET CHEM

	MPLE MBER QC	RE-RUN MATRIX	RE-RUN OTHER	MI:		OTAL IOURS	EXPANDED DELIVERABLE	
METHOD: QC BATCH #: PREP DATE: COMP DATE: USER:		METHOD 922	3 INITIAL PRE: ANA	PDF	n< n=	DATA ENT INITIA DATE		
Work Order	Lab Number	Struc		Exp.	Analysis Date	Sample	e ID:	# ce/
HK69R-1-AA	J-5I220359-001	XX I 88	IZ 5I	Е	9-22-05	B1DT65	5	0
HK69R-1-AH	J-5I220359-001-X	XX I 88	IZ 5I	E		B1DT65	DUP	0
HK692-1-AA	J-5I220359-002	XX I 88	IZ 5I	E		B1DT57	7	0
HLQ4T-1-AA	J-5I300000-304-B	XX I 88	IZ 5I			INTRA-	LAB BLANK	0
HLQ4T-1-AC	J-5I300000-304-C	XX I 88	IZ 5I		4	INTRA-	LAB CHECK	16.8
		Control	Limits					

(0-0)

11/3/2005 4:20:12 PM

Lot No., Due Date:

J5I220345,J5I240202,J5I240204; 11/07/2005

384868; PGW 615HANFORD HANFORD

Client, Site:

QC Batch No., Method Test: 5273296; RGAMLEPS Gamma by LEPS

SDG, Matrix:

W04769; WATER

	COC			
1.1	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0	QC Batch			
2.1	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
3 0	QC & Samples		SEE	
3.1	Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
10	Raw Data			S CHI
4.1	Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0	Other			
	Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:	per or represent		

First Level Review

STL Richland

QAS_RADCALCv4.8.15

Page 1



OC Batch Number: 5-273296

Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis	/	1	
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	/		
Detection Limit?			
3. Are the correct isotopes reported?	V		
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 	1		
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?	V		
3. Is the blank result < the Contract Detection Limit?	1/	1	
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			1
5. Is the LCS recovery with contract acceptance criteria?	-		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance		_	
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			-
2. Are all required forms filled out?	V		
3. Was the correct methodology used?			
4. Was transcription checked?	/		
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			1
Comments on any "No" response:	÷		
		,	,
Second Level Review: As Con		Date	11-25-0



11/3/2005 4:21:31 PM

Lot No., Due Date:

J5l200383,J5l220359; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5273300; RGAMMA Gamma by GER

SDG, Matrix:

W04769; WATER

	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	QC Batch	dia Mil		
2.1	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
3.0	QC & Samples			
	Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
4 0	Raw Data			
4.1	Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0	Other	CONTRACTOR OF	E G V	
	Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:			

First Level Review

Pan Inderson

Date 11. 3-05

STL Richland



OC Batch Number: 5273300

Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis	1	1	
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	/		
Detection Limit?	0/		
3. Are the correct isotopes reported?	V		
B. QC Samples	/	1	
 Is the Minimum Detectable Activity for the blank result ≤ the 	1/		
Contract Detection Limit?	1	1	
2. Does the blank result meet the Contract criteria?	1/		
3. Is the blank result < the Contract Detection Limit?	1		
4. Is the blank result > the Contract Detection Limit but the sample			1
result < the Contract Detection Limit?			V
5. Is the LCS recovery with contract acceptance criteria?	1/		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection	1		
Limit?	U		
8. Do the MS/MSD results and yields meet acceptance criteria?			1
9. Do the duplicate sample results and yields meet acceptance	- Annual Marie		
criteria?	V		
C. Other			
1. Are all Nonconformances included and noted?			V
2. Are all required forms filled out?	/		
3. Was the correct methodology used?			
4. Was transcription checked?	/		
5. Were all calculations checked at a minimum frequency?	-		
6. Were units checked?			•
Comments on any "No" response:			
:		,	
Second Level Review: Jul Lun		Deter	11-29



11/7/2005 1:47:59 PM

Lot No., Due Date:

J5I200383,J5I220336,J5I240203; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5273267; RALPHA-A Alpha by GPC-Am

SDG, Matrix:

W04769; WATER

1.0	COC	spotsmiller, and hish oh who w	Amelia T	NIZA
	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? OC Batch	Yes	NO	N/A
	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
	QC & Samples	14 1 10 St. 16 14 16 16 16 16 16 16 16 16 16 16 16 16 16	1	the She salms
	Is the blank results, yield, and MDA within contract limits?	Yes		
	Is the LCS result, yield, and MDA within contract limits?	Yea		
A1	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	magazini (A.A. Carres)	V
	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
	Raw Data			The state of
	Were results calculated in the correct units?	Yea	No	N/A
	Were analysis volumes entered correctly?	Yes	No	N/A
	Were Yields entered correctly?	Yes	No	NA
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0	Other	and the same of th		1
	Are all nonconformances included and noted?	Yes	No	NA
	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:	CLEAN AT A LEVEL WITH THE A LEVEL WE WIND A PERSON	1 1.10 1 7. 976	

First Level Review

STL Richland

QAS_RADCALCv4.8.15

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Page 1



QC Batch Number: 5 2 7 3 2 6 7

Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?		_	
2. Is the sample Minimum Detectable Activity < the Contract	1/		
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the	V		
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	-		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			-
5. Is the LCS recovery with contract acceptance criteria?		_	
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance	, ,		
criteria?	0		
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?	/	/	
4. Was transcription checked?	/		
5. Were all calculations checked at a minimum frequency?	/		
6. Were units checked?	/	1	•
Comments on any "No" response:			

11/7/2005 1:49:49 PM

Lot No., Due Date:

J5I200383,J5I220336,J5I220359,J5I240203; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5273293; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix:

W04769; WATER

00	S, Matrix. WU4769, WATER			
	COC	with the state of the	PAN .	11/2
	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	V	r rL. Welus r a	N/A
	QC Batch	- water and the Anthron		Same King has
	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yea	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
3.0	QC & Samples	经过一种企		LAK.
	Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	NIA
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
1 0	Raw Data			^r/o, \$16
4.0	Were results calculated in the correct units?	Yes	No	N/A
		V		
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	NA
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0	Other	NEW MENTAL SERVICES	Property and	
	Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:	- ch-feotronoronalizamiatic-ettymatiketen datum voi interessent	and the same and pro-order and	****

First Level Review

STL Richland

QAS_RADCALCv4.8.15

Date 11/7/09

Page 1



OC Batch Number: 5 273293

	Yes (√)	No (√)	N/A (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	1		
2. Is the sample Minimum Detectable Activity < the Contract		1	
Detection Limit?		- 4	-
3. Are the correct isotopes reported?	0		
B. QC Samples		+	
1. Is the Minimum Detectable Activity for the blank result ≤ the	1/		
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	~		
4. Is the blank result > the Contract Detection Limit but the sample			1
result < the Contract Detection Limit?	1		1
5. Is the LCS recovery with contract acceptance criteria?	-		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection	./		
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			-
9. Do the duplicate sample results and yields meet acceptance	1		
criteria?			
C. Other			/
1. Are all Nonconformances included and noted?			1
2. Are all required forms filled out?	V		
3. Was the correct methodology used?	V		
4. Was transcription checked?	1		
5. Were all calculations checked at a minimum frequency?	V		
6. Were units checked?	U		•
Comments on any "No" response:			
		,	
Second Level Review:			,
Second Level Review:		Dotos	11-25



11/7/2005 1:30:41 PM

Lot No., Due Date:

J5I200383,J5I220345,J5I240202; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5273298; RSR85907 Sr-85/90 by GPC-7

COC	A Secret Constitution of the Constitution of t	in white	Part is
	Yes	No	N/A
	Sheet? Yes	No	N/A
Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
Company of the contract of the		7 136	S. L. A.
is the blank results, yield, and MDA within contract limits?	Veg	NO	N/A
Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	NA
Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
Are the sample yields and MDAs within contract limits?	Yes	No	N/A
Raw Data		godeni.	
Were results calculated in the correct units?	Yes	No	N/A
Were analysis volumes entered correctly?	Yes	No	N/A
Were Yields entered correctly?	Yea	No	N/A
Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
Were raw counts reviewed for anomalies?	Yes	No	N/A
Other	er (n. g. l. 1975) aweit i reguler	17651117	& segment
	Yes	No	N/A
Are all required forms filled out?	Yea	No	N/A
Was the correct methodology used?	Yes	No	N/A
Was transcription checked?	Yes	No	N/A
Were all calculations checked at a minimum frequency?	Yes	No	N/A
Are worksheet entries complete and correct?	Yes	No	N/A
Comments on any No response:	Security is a communication of the security and another and another security and additional security is	*** ***** *	Lange Version Co.
	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? OC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Are the QC appropriate for the analysis included in the batch? Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Does the Worksheets include a Tracer Vial label for each sample? QC & Samples Is the blank results, yield, and MDA within contract limits? Is the LCS result, yield, and MDA within contract limits? Are the MS/MSD results, yields, and MDA within contract limits? Are the duplicate result, yields, and MDAs within contract limits? Are the sample yields and MDAs within contract limits? Raw Data Were results calculated in the correct units? Were analysis volumes entered correctly? Were Yields entered correctly? Were Yields entered correctly? Were raw counts reviewed/meet contractual requirements? Other Are all required forms filled out? Was the correct methodology used? Was transcription checked? Were all calculations checked at a minimum frequency? Are worksheet entries complete and correct?	Is the ICCC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? OC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Are the QC appropriate for the analysis included in the batch? Yes Are the QC appropriate for the analysis included in the batch? Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes Does the Worksheets include a Tracer Vial label for each sample? Yes QC & Samples Is the blank results, yield, and MDA within contract limits? Yes Is the LCS result, yield, and MDA within contract limits? Yes Are the MS/MSD results, yields, and MDA within contract limits? Are the duplicate result, yields, and MDAs within contract limits? Yes Are the sample yields and MDAs within contract limits? Yes Raw Data Were results calculated in the correct units? Were analysis volumes entered correctly? Were Yields entered correctly? Were Yields entered correctly? Were raw counts reviewed/meet contractual requirements? Yes Other Are all nonconformances included and noted? Are all nonconformances included and noted? Was the correct methodology used? Was transcription checked? Were all calculations checked at a minimum frequency? Are worksheet entries complete and correct?	Is the ICCC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? OC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No Are the QC appropriate for the analysis included in the batch? Yes No Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No Does the Worksheets include a Tracer Vial label for each sample? Yes No Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No Is the Worksheets include a Tracer Vial label for each sample? Yes No Is the LCS result, yield, and MDA within contract limits? Yes No Are the MS/MSD results, yield, and MDA within contract limits? Yes No Are the Ms/MSD results, yields, and MDA within contract limits? Yes No Are the duplicate result, yields, and MDAs within contract limits? Yes No Raw Data Were results calculated in the correct units? Yes No Were analysis volumes entered correctly? Were Yields entered correctly? Yes No Were Yields entered correctly? Yes No Were a wounts reviewed/meet contractual requirements? Yes No Other Are all nonconformances included and noted? Are all nonconformances included and noted? Yes No Was transcription checked? Yes No Was transcription checked? Yes No Were all calculations checked at a minimum frequency? Yes No Were all calculations checked at a minimum frequency? Yes No Yes No Yes No Yes worksheet entries complete and correct?

First Level Review STL Richland

QAS_RADCALCv4.8.15

Page 1



QC Batch Number: 5273296

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11/4/2005 3:38:42 PM

Lot No., Due Date:

J5I220336,J5I220359,J5I240201,J5I240202,J5I240203,J5I240204; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5273266; RTC99 Tc-99 by LSC

SDG, Matrix:

W04769; WATER

	ls the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0	QC Batch			
2.1		Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
3 0	QC & Samples			STORY
	Is the blank results, yield, and MDA within contract limits?	Yea	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
4.0	Raw Data	District of the last		
4.1	Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5 0	Other	1		
	Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yea	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:			
	Yas 1 = 1 = 1 = 1 = 1 = 1 = 1 = 1 = 1 = 1			

First Level Review

Pans anensa

Date 11.4.05



OC Batch Number: 5-2 73266

Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis	/		
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	. /		
Detection Limit?	V		
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the	1		
Contract Detection Limit?	1		
2. Does the blank result meet the Contract criteria?	V		
3. Is the blank result < the Contract Detection Limit?	V		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?	1/		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?	1		
9. Do the duplicate sample results and yields meet acceptance			
criteria?	1		
C. Other			
1. Are all Nonconformances included and noted?			4
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?	/		
5. Were all calculations checked at a minimum frequency?	/		
6. Were units checked?			1.
Comments on any "No" response:			
		,	•
Second Level Review:			
Second Level Review:	The decision and the Co	Date: _	11-25-09



10/31/2005 11:15:39 AM

Lot No., Due Date:

J5I200383,J5I220336,J5I220345,J5I240201,J5I240202,J5I240203; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5273295; RTRITIUM H-3 by LSC

SDG, Matrix:

W04769; WATER

1.0 COC	and the second of the second o	de l'action	La San San San San San San San San San Sa	13
the second of th	complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0 QC Batch 2.1 Do the Summary	/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yea	No	N/A
2.2 Are the QC appro	priate for the analysis included in the batch?	Yes	No	N/A
2.3 Is the Analytical E	Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4 Does the Worksh	eets include a Tracer Vial label for each sample?	Yes	No	N/A
3.0 QC & Samples 3.1 Is the blank resul	ts, yield, and MDA within contract limits?	Yeş	No	N/A
3.2 Is the LCS result,	yield, and MDA within contract limits?	Yes	No	N/A
3.3 Are the MS/MSD	results, yields, and MDA within contract limits?	Yes	No	N/A
3.4 Are the duplicate	result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5 Are the sample y	ields and MDAs within contract limits?	Yes	No	N/A
4.0 Raw Data			ALTE S	organite w
	culated in the correct units?	Yes	No	N/A
4.2 Were analysis vo	lumes entered correctly?	Yes	No	N/A
4.3 Were Yields ente	red correctly?	Yes	No	NA
4.4 Were spectra rev	riewed/meet contractual requirements?	Yes	No	N/A
4.5 Were raw counts	reviewed for anomalies?	Yes	No	N/A
5.0 Other				Park.
	mances included and noted?	Yes	No	NA
5.2 Are all required for		Yes	No	N/A
5.3 Was the correct r		Yes	No	N/A
5.4 Was transcription		Yes	No	N/A
5.5 Were all calculati	ons checked at a minimum frequency?	Yes	No	N/A
	tries complete and correct?	Yes	No	N/A
6.0 Comments on an	y No response:	THE LOSS OF SECTION		****** ****
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First Level Review

STL Richland
QAS_RADCALCv4.8.15

Date 10/31/5

Page 1



OC Batch Number: 5273245

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11/26/2005 10:43:28 AM

Lot No., Due Date:

J5I220336,J5I220345,J5I220359,J5I240201,J5I240202,J5I240203,J5I240204; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5321304; RUNAT UNat by KPA

SDG, Matrix:

W04769; WATER

	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0	QC Batch			
	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
3.0	QC & Samples			-
	Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
4.0	Raw Data	Air		
	Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	NA
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	NA
4.5	Were raw counts reviewed for anomalies?	Yea	No	N/A
5.0	Other	•		
	Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response: See NCM. // 07030			

First Level Review

Pam anderson

Date 11-24-05



OC Batch Number: 5321304

Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis	and the same of		
1. Are the sample yields within acceptance criteria?	-		
2. Is the sample Minimum Detectable Activity < the Contract	***************************************		
Detection Limit?	1		
3. Are the correct isotopes reported?	3/		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the	- Commence	1	
Contract Detection Limit?	1		
2. Does the blank result meet the Contract criteria?		-	
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			1
result < the Contract Detection Limit?		}	
5. Is the LCS recovery with contract acceptance criteria?	1		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?	./		
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			,
1. Are all Nonconformances included and noted?			L.
2. Are all required forms filled out?	-		
3. Was the correct methodology used?		The same	
4. Was transcription checked?	/		
5. Were all calculations checked at a minimum frequency?	-		
6. Were units checked?	/		
3. Was the correct methodology used? 4. Was transcription checked? 5. Were all calculations checked at a minimum frequency?	lue		

Clouseau Nonconformance Memo



NCM #: 10-07030

NCM Initiated By: Pam Anderson Date Opened: 11/26/2005

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: UNat by KPA

Lot #'s (Sample #'s): J5I220336 (3,4,5), J5I220345

(1), J5I220359 (1,2),

J5I240201 (1,2,3), J5I240202

(1,2), J5I240203 (1),

J5I240204 (1,2), J5K170000

(304),

QC Batches: 5321304

Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)

Problem Description / Root Cause

Name Pam Anderson

Date 11/26/2005

Description

the LCS was out on the first anlaysis. A reanalylsis was done with good QC.

Ranalysis data accepted.

Corrective Action

Name

Date

Corrective Action

Pam Anderson

11/26/2005

The batch was reanalyzed with good QCA.

Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

Quality Assurance Verification

Verified By

Due Date

Status

This section not yet completed by QA.

Notes

Approval History

Date Approved

Approved By

Position

Date Printed: 11/26/2005

Page 1 of 1



11/22/2005 10:36:12 AN

Lot No., Due Date:

J5l220359; 11/07/2005

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5273304;

SDG, Matrix:

W04769; WATER

			AL ACTOR	Total Co
	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	QC Batch	建设工程		
2.1	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	NA
3.0	QC & Samples			KITE
	Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
4.0				
4.0	Raw Data Were results calculated in the correct units?	V	CHIE	AL/A
		V		N/A
	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0	Other			
5.1	Are all nonconformances included and noted?	Yes	No	NA
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yea	No	N/A
	Comments on any No response:	,		95

First Level Review

Pan Onderson

Date 11.22.05



OC Batch Number: 5273304

Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?	V	and the same of th	
2. Does the blank result meet the Contract criteria?	1		
3. Is the blank result < the Contract Detection Limit?	i		
4. Is the blank result > the Contract Detection Limit but the sample			1
result < the Contract Detection Limit?		-	
5. Is the LCS recovery with contract acceptance criteria?	1		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			-
B. Do the MS/MSD results and yields meet acceptance criteria?			-
9. Do the duplicate sample results and yields meet acceptance			
criteria?	i		
C. Other			
1. Are all Nonconformances included and noted?			1
2. Are all required forms filled out?			-
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			1
Comments on any "No" response: Incolation (v. Lever Meet	time.	and	Temp

PNNL					СНА	IN OF	CUSTODY	/SAMPLE ANALYSI	S REQUEST	C.O.C. #		05-05	53-2	
										Pa	ge <u>1</u>	of	1	
Collector	DURATEK					Contact/R			Telephone No.	MSIN	FAX			
SAF No.	R.T.SICH					Dot Stev		509-376-5056 Purchase Order/Charge	Code		_			
I05-053 Project Title								Temp.						
CERCLA 100NI Shinned To (Lab)		2005				Method of	Shipment	H-78	Ice Chest No. SML.	0.				
Severn Trent Inc	corporated. Ric	hland				Govt Tri	uck		Offsite Property No.					
CERCLA							Pr	iority: 45 Days						
POSSIBLE SAME	PLE HAZARI	DS/RE	EMARKS	Ü	W0976; 15 F 200	383		SPECIAL INSTRUCTIONS	Hold Time	Fotal Activity Exer	nption:	Yes 🔽	No L	
					Due	110 4	.5							
Sample No.	Lab ID		Date	Time	No/Typ	e Container		Sample Analysis	3	Pi				
B1DP28		W	9-20-05	103	1x1000-	mL P	906.0_H3_LSC: Tr	itium (1)	HK1L3			None		
B1DP28		W	1	1	1x1000-	mL P	9310_ALPHABETA	A_GPC: Gross Beta (1)	27.5.			HNO3 t	to pH <2	
B1DP28		W			1x20-mL	. P	Activity Scan					None		
B1DP28		w			3x1000-	mL G/P	SRISO_SEP_PRE	CIP_GPC: Sr-90 (1)				HNO3 t	to pH <2	
			47	+	-									
		-												
									** • =					
		-			1									
	1			1	4			-	. 791-751					
				7Time (100) 0 2005	Received By Received By	Jensen M	SEP 2 0 2005	S = Soil SE = Sediment		DS =	Drum Solid Drum Liqui			
		_			_ 0.0					SO = Solid SI = Sludge		WT =	Tissue Wine	
Relinquished By					Date	/Time	Received By			W = Water O = Oil A = Air		V =	Liquid Vegetation Other	
Relinquished By					Date	/Time	Received By		Date/Time					
FINAL SAMPL DISPOSITION		Method	l (e.g., Return to	customer, p	er lab procedu	re, used in proc	cess)	Disposed By		Da	ite/Time			

PNNL				1	CHAIN OF	CUSTODY/SAMPLE ANALYSIS REQUEST C.O.C. # IO Page 1	5-053-75
Collector DUR					Contact/F	the state of the s	01 1
Hali	SICKLE				Dot Ste	509-376-5056	
SAF No. 105-053					Sampling	Origin Purchase Order/Charge Code	
Project Title CERCLA 100NR	2 Cantombon	2005			Or	5- SA-S H98 Ice Chest No. SML SSO Temp.	
Shinned To (Lah)					Method o	f Shipment Bill of Lading/Air Bill No.	
Severn Trent Inco Protocol	ornorated, Ric	hland			Govt T	Priority: 45 Days Offsite Property No.	
CERCLA POSSIBLE SAMP	LE HAZARI	OS/RE	MARKS	W	04769	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption:	Yes V No
Sample No.	Lab ID		Date	Time	No/Type Container	Sample Analysis Pres	ervative
B1DP85		W	9-20-05	1216	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1DP85		w	1	1	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1DP85		W			1x20-mL P	Activity Scan	None
B1DP85		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	None
B1DP85		W	1	-	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
				/			
					166	(444)	-
RUURATEK P. T. SICKL	E Print		Sign		SEP 7 0 2005	Received By Jeff Jensen Sign SEP 2 0 2005 S = Soil	DS = Drum Solid
Relinquished By	1 111	1			Date/Time	Received By Date/Time SE = Sediment SO = Solid SI = Sludge	DI. = Drum Liqui T = Tissue WI = Wine I. = Liquid
Relinquished By					Date/Time	Received By Date/Time O = Oil	V = Vegetation X = Other
Relinquished By					Date/Time	Received By Date/Time	
FINAL SAMPLE DISPOSITION		Method	d (e.g., Return to	customer, per	lab procedure, used in pro	Disposed By Date/Time	



Sample Check-in List

Date	Time Received: 6	20 05 1460		V
Clie	nt:	SDG #: wo1769	NA[] SAF#:	105-055 105-053 NA[]
Wor	k Order Number: J	51 200 383 Chai	in of Custody #	15-053-15,2,5)
Ship	ping Container ID:_	5ML 550 5M-5335 Air I	3ill #	15-053-75, Z ₁ =1
1.	Custody Seals or	shipping container intact?	NA	(1) Yes [] No []
2.	Custody Seals da	ted and signed?	· NA	[Yes [] No []
3.	Chain of Custody	record present?	. '	Yes [] No []
4.	Cooler temperatu	re:NA // 5.Vermi	culite/packing mater	ials is NA[] Wet[] Dry []
6.	Number of samp	es in shipping container:	49	
7.	Sample holding t	imes exceeded?	NA	[Yes [] No []
8.	Samples have:tapetape	ıls	hazard lab	els e samples labels
9.	Samples are:in good conbroken	ndition	leakinghave air bo (Only for sample	ubbles es requiring head space)
10.	Sample pH taken	NA[] pHQ[pH>2 // pH>9	[]
11.	-	Sample Collector Listed? * on only. No corrective action ne	eded.	Yes No []
12.	Were any anomal	ies identified in sample receipt?		Yes [] No []
13.	Description of and	omalies (include sample numbers	i):	
Samp	le Custodian:	of f	Date: 09 20	05
C	Client Sample ID	Analysis Requested	Condition	Comments/Action
Client	Informed on	by	Person contacted	. •
	o action necessary; pro			
Project	Manager		Date	
LS-023	3, 9/03, Rev. 5			

PNNL					CHAIN	OF (CUSTODY	/SAMPLI	E ANALYSI	S REC	QUEST	C.		5-009	
Collector					lo	ontact/Re	equester		-	Telei	phone No.	MSIN	FAX	1 of	1
Collector SAF No.	REWIN	IGT	ON	-	S	Dot Stewart Sampling Origin // C				50 Pure	509-376-5056 Purchase Order/Charge Code				
W05-009						Hantond							Tomp		
Project Title RCRA Sentember	2005										Chest No. 514		Тетр.		
Shinned To (Lab) Severn Trent Inco	rporated. Ric	hland			N	fethod of S Govt Tru				Bill	of Lading/Air Bil	l No.			
Protocol RCRA								riority: 45 Days		Offsi	ite Property No.				
POSSIBLE SAMPI	S/RE	MARKS		W0976 757 22 Due	0336							ty Exemption	: Yes ✔	No L	
Sample No.	Lab ID		Date	Time	No/Type C	ontainer			Sample Analysi	is			P	eservative	
B1DTH7		W	9-21-05	1304	1x20-mL P		Activity Scan		HK6	41				None	
B1DTH7		W	1	1	1x500-mL I	5	TC99_ETVDSK_L	SC: Tc-99 (1)	1/10	.,				HCI to	pH <2
			1			14	Received By				11-	4			
Relinquished By Print Sign Date/Tin Relinquished By Print SEP 2 Relinquished By Date/Tin						2 2003 me		Jensen	Marie Sign	SEP	Date/Time Date/Time Date/Time	S = S SE = S SO = S SL = S	Sediment Solid Sludge Vater Dil	DS = DI. = T = WI = I. = V =	Drum Solid Drum Liqui Tissue Wine Liquid Vegetation Other
Relinquished By					Date/Ti	me	Received By				Date/Time				
FINAL SAMPLE DISPOSITION	Disposal 1	Method	(e.g., Return to	customer, per	lab procedure,	used in proc	ess)		Disposed By				Date/Tim	e	

PNNL					CHAIN	OF (CUSTODY/	SAMPLE A	NALYSIS R	REQUEST	-	W05-009-		
Collector R. BR.	EMING	ilc	N	-	Co	ontact/Re	quester			Telephone No.	MSIN	FAX		
SAF No.						Dot Stewart				509-376-5056 Purchase Order/Chare				
W05-009						4014 200								
Project Title RCRA September 2	2005					7	TS-SAWS-	1493		Ice Chest No. SAW 2/1 Temp.				
Shinned To (Lah)						ethod of S	Shipment			Bill of Lading/Air Bill	No.			
Severn Trent Incorporated, Richland Go Protocol								ority: 45 Days		Offsite Property No.				
RCRA POSSIBLE SAMPLE HAZARDS/REMARKS								SPECIAL INSTR	ICTIONS Hold	Time	Total Activity Exer	nntion: Yes	No	
es es	IIAZAKO	O/RE			W04769	? 								
Sample No.	Lab ID		Date	Time	No/Type Co	ontainer			Sample Analysis			Preservative		
B1DTH0		W	9-22-05	1004	1x20-mL P		Activity Scan		HK65D			None		
B1DTH0		W	4	4	1x500-mL P		TC99_ETVDSK_LS	C: Tc-99 (1)	1/100			HCl to pl	H <2	
	R. Pre	uvi	Sign		SEP 22	2005		Print Jeff Jensen	Sign	Date/Time /49	<100 (S = Soil SE = Sediment	$DS = \Gamma$	Onim Solid	
Relinquished By Date/Time Relinquished By Date/Time							Received By Received By			Date/Time	SO = Solid SI = Sludge W = Water O = Oil A = Air	T = T WI = V I. = I V = V	lissue	
Relinquished By					Date/Tim	ne	Received By			Date/Time		D. 15		
FINAL SAMPLE DISPOSITION	Disposal N	/lethod	(e.g., Return to	customer, per	lab procedure, us	sed in proce	ess)	ī	pisposed By		Da	te/Time		

PNNL					CHAI	OF	SAMPLE A	ANALYSIS F	REQUEST	C.O.C.	W05-00	9-160		
Collector). R. B	REWIN	GTO	25		(Contact/R				Telephone No.	MSIN	FAX	1	
SAF No.		<u> </u>			5	Dot Stewart Sampling Origin				509-376-5056 Purchase Order/Char				
W05-009 Project Title	· · · · · · · · · · · · · · · · · · ·					DTJ-SAWS-1+93				Ice Chest No. 5 Aws 2/2 Temp.				
RCRA Sentembe								1793						
Shinned To (Lab) Severn Trent Inc.	ornorated. Ric	hland				Govt Tr	Shipment ick		Market Control	Bill of Lading/Air Bill	No.			
Protocol RCRA							Pri	ority: 45 Days		Offsite Property No.				
POSSIBLE SAMP	LE HAZARI	DS/RE	MARKS		W0476	9		SPECIAL INSTR	UCTIONS Hold	Time	Total Activity Ex	emption: Yes	✓ No L	
Sample No.	Lab ID	*	Date	Time	No/Type (Container			Sample Analysis			Preservati	ve	
B1DTH5		W	9-22.05	0825	1x20-mL F		Activity Scan		Н	K65H		Non	Э	
B1DTH5		W)	1	1x500-mL	G/P	UTOT_KPA: Uraniu	ım (1)				HNC	03 to pH <2	
B1DTH5		w			1x1000-mL	. P	P 906.0_H3_LSC: Tritium (1)						9	
B1DTH5		W			1x1000-mL	P	9310_ALPHABETA_GPC: Alpha + Beta (2))3 to pH <2	
B1DTH5		W	-5	1	1x500-mL	P	TC99_ETVDSK_LS	GC: Tc-99 (1)				HCI	to pH <2	
Dalin mish 2 D.	D.		A		D-4-/F	140	Received By	Dia	6:	Date/Time 44)				
Relinquished By Relinquished By	INGTO	NE	P/Bru	vij	SEP 2 2	2 2003	Jeff Received By	Jensen Print	Sign	SEP Date/Filme 1945	S = Soil SE = Sedimer SO = Solid SI = Shudge	nt DI. T	= Drum Solid = Drum Liqui = Tissue = Wine	
Relinquished By					Date/Ti	ime	Received By	· · · · · · · · · · · · · · · · · · ·		Date/Time	W = Water O = Oil A = Air	T. V	 wine Liquid Vegetation Other 	
Relinquished By					Date/T	ime	Received By			Date/Time	L			
FINAL SAMPLI DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure,	used in proc	eess)	Г	Disposed By		Г	ate/Time		

PNNL					CHAIN OF	CUSTODY/	SAMPLE ANALYS	SIS REQUEST		V05-009-176		
Collector 🕥 🖂		230.10	77011		Contact/R	equester		Telephone No.		FAX		
الواصا	BREW	INC	1101		Dot Ste	wart		509-376-5056				
SAF No. W05-009					Sampling	Origin Hank	val	Purchase Order/Charge Co	Purchase Order/Charge Code			
Project Title					2	TS-SAWS-14		Ice Chest No.	Temp.			
RCRA September	er 2005						9)	30012 3	3 10 a 4-77-02			
Shinned To (Lab) Severn Trent Inc	ornorated Ric	hland		-01	Method of Govt Tr	Shipment		Bill of Lading/Air Bill No.				
Protocol	ALLEH HALLANDER	Mante			ine excitativals asinostimolofisticinal		ority: 45 Days	Offsite Property No.				
RCRA POSSIBLE SAME	TEHAZADI	DE/DE	MADVE				SPECIAL INSTRUCTIONS	Hold Time Total	al Activity Evenn	otion: Yes 🗸 No		
** **	LE HAZAKI) (C	WARKS		w04769							
Sample No.	Lab ID	*	Date	Time	No/Type Container	0.0000000000000000000000000000000000000	Sample Analy	ysis		Preservative		
B1DTF5		W	9-22-05	0900	1x20-mL P	Activity Scan	Activity Scan HK 65R					
B1DTF5		W	1	1	1x500-mL G/P	UTOT_KPA: Uraniur	HNO3 to pH <2					
B1DTF5		W			1x1000-mL P	906.0_H3_LSC: Triti	um (1)			None		
B1DTF5		W	-6	1	1x500-mL P	TC99_ETVDSK_LS0	C: Tc-99 (1)	100000000000000000000000000000000000000	1	HCI to pH <2		

			1	,		. /			<100.0	CPM		
Relinquished By Print D.R. BREWINGTON O. A. S. Duwy (5.5) Relinquished By Da						Received By Jeff Jensen Sign Date/Time Sign Date/Time Sign Date/Time Sign Date/Time Sign Matr Sign Date/Time Sign Date/Time Sign Date/Time Sign Date/Time Sign Date/Time Sign Matr Sign Date/Time Sign Date/Time Sign Matr Sign Matr Sign Date/Time Sign Date/Time Sign Matr Sign Date/Time Sign Matr Sign Sign Matr Sign Matr Sign Sign Matr Sign Sign Matr Matr Sign Matr Matr Sign Matr Matr Sign						
Relinquished By					Date/Time	Received By		Date/Time (W = Water O = Oil A = Air	V = Liquid V = Vegetation X = Other		
Relinquished By			· · · · · · · · · · · · · · · · · · ·		Date/Time	Received By		Date/Time				
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure, used in pro	ocess)	Disposed By		Date/	Time		

PNNL					CHAI	N OF	CUSTODY	/SAMPLE	ANALYSIS	REQUEST	C.O.C. #	W05-00)9-148	
											Pa	ige <u>1</u> of	f 1	
Collector) . R. B	REWIN	GIC	SIC			Contact/Requester Dot Stewart				Telephone No. MSIN FAX				
SAF No.						Sampling Origin Han Ford				Purchase Order/Charge Code				
W05-009 Project Title		_			-	160				Ice Chest No.				
RCRA Septembe	r 2005									34W3-212				
Shinned To (Lah) Severn Trent Inc.	ornorated, Ric	hland		A-1000	BEAR I AMERICA MA	Method of Govt Tru		-		Bill of Lading/Air Bill	No.			
Protocol								riority: 45 Days		Offsite Property No.				
POSSIBLE SAMPLE HAZARDS/REMARKS ** **								SPECIAL INST	RUCTIONS H	old Time	Total Activity Exe	mption: Yes	✓ No □	
Sample No.	Lab ID	*	Date	Time	No/Type	Container	400		Sample Analysis			Preservat	tive	
B1DT91		W	9:22.05	1159	1x20-mL	Р	Activity Scan		HK654			Nor	ne	
B1DT91		W	1	113	1x500-m	L G/P	UTOT_KPA: Urani	ium (1)	//X00/			HN	IO3 to pH <2	
B1DT91		W		-	1x500-m	L P	TC99_ETVDSK_L	SC: Tc-99 (1)				нс	I to pH <2	
											-			
			-		1									
														
	1	1				11:01	/			his	<100	CDI.		
Relinquished By D.R. BREV	VINGTO	NO.	R. Dru	undo	CCD 2	7 2005	Received By	eff Jensen	1 AM	Date/Time/42 SEP 2 2 2005	S = Soil	DS	= Drim Solid	
Relinquished By			,	0	Date	Time	Received By		///	Date/Time	SE = Sedimen SO = Solid SL = Sludge W = Water	t DI. T WI I.	= Drim Liqui = Tissue = Wine = Liquid	
Relinquished By					Date	Time	Received By			Date/Time	O = Oil A = Air	v x	VegetationOther	
Relinquished By Dat					Date	/Time	Received By			Date/Time				
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, pe	r lab procedu	re, used in proc	cess)		Disposed By		Di	ate/Time		



Sample Check-in List

Date/Ti	ime Received: 0	9 22 05 14 28			Ios054	
Client:_	Puw	SDG #:_ W	0 4769 N	A[] SAF#:_	605-009 N	A[]
Work C	Order Number:	757220336	Chain of (5-054-5 W	
Shippin	g Container ID:	5AWS 212	Air Bill #	/7	6,160,182,	5KS 11610
1.	Custody Seals on	shipping container into	act?	NA	Yes [] No []	111010
2.	Custody Seals da	ted and signed?		- NA	Yes [] No []	
3.	Chain of Custody	record present?			Yes [] No []	
4.	Cooler temperatur	re:NAM	5.Vermiculite	/packing materi	als is NA[] Wet[].Dry.[/]
6.	Number of sample	es in shipping containe	r	<i>†</i>		
7.	Sample holding ti	mes exceeded?		NA	Yes [] No []	
8.	Samples have:tapecustody sea	ls	-	hazard labo	els : samples labels	
9.	Samples are:in good conbroken	dition		leaking have air bu Only for sample	bbles s requiring head spa	ace)
10.	Sample pH taken?	NA[] p	H<2 // pH>	2 // pH>9 []	
11.	•	Sample Collector Liste on only. No corrective			Yes [No []	
12.	Were any anomali	es identified in sample	receipt?		Yes [] No []	
13.	Description of ano	omalies (include sample	e numbers):			· ——
Sample (Custodian:	41	Dat	e: 09 22	05	
Clie	nt Sample ID	Analysis Requested	C	ondition .	Comments/Ac	tion
				-		
	formed on	_by	Pe	rson contacted		
			Da	ite	-	

PNNL					CHAIN OF	CUSTODY/S	SAMPLE A	ANALYSIS I	REQUEST	C.O.C. #	I05-054-5		
Collector B5	. = 9 0 120 0	***	2 %		Contact/Re			Telephone No.	MSIN	FAX			
SAF No.	EMING	10			Dot Stew Sampling (509-376-5056 Purchase Order/Charge Code					
I05-054 Project Title						DTS-SAWS-H93			Ice Chest No. Carata Temp.				
LTMC & 2UP1-C	C. SEPTEMBI	ER 200	05				193		SAM TIT				
Shinned To (Lah) Severn Trent Inco	proporated. Ric	nland			Method of Govt. Tr				Bill of Lading/Air Bill !	٧٥.			
Protocol SURV						Prior	rity: 45 Days		Offsite Property No.				
POSSIBLE SAMPI	LE HAZARD	S/RE	MARKS	Ç	W0 9769 JS I 220 345 Dun 11 0		SPECIAL INSTR	RUCTIONS Hold	Time	Total Activity Exer	nption: Yes 🗹 No 🗀		
Sample No.	Lab ID		Date	Time	No/Type Container			Sample Analysis			Preservative		
B1DTX3		W	9-22-05	1006	1v1000-ml P	906.0_H3_LSC: Tritiu	m (1)	HKGG	R		None		
B1DTX3		W	1 7 77 705	1006	1x20-mL P	Activity Scan		77166			None		
B1DTX3		w			2x4000-mL G/P	I129LL_SEP_LEPS_G	GS_LL: I-129 (1)				None		
B1DTX3		w			3x1000-mL G/P	SRISO_SEP_PRECIP	GPC: Sr-90 (1)				HNO3 to pH <2		
B1DTX3		W	•	1	1x500-mL G/P	UTOT_KPA: Uranium	(1)				HNO3 to pH <2		
	40			/	- J - 77	4			1//018	4			
Relinquished By Relinquished By	NGTON	R.E	Jewing	h	Date/Time 438	Received By Jeff	Jenseh	Sign	Date/Time /42	S = Soil	DS = Drim Solid		
Relinquished By			U)	Date/Time	Received By		// /	Date/Time	SE = Sediment SO = Solid SI = Sludge W = Water	DI. = Dram Liqui T = Tissue WI = Wine I. = Liquid		
Relinquished By					Date/Time	Received By			Date/Time	O = Oil A = Air	V = Vegetation X = Other		
Relinquished By					Date/Time	Received By			Date/Time				
FINAL SAMPLI DISPOSITION		Method	(e.g., Return to	o customer, per	r lab procedure, used in proc	cess)		Disposed By		Da	te/Time		



Sample Check-in List

Date	Time Received:	19 22 05 14 28		Io5-059	
Client	Puw	SDG #: 60476	9 NA[] S	SAF #: 605-009 NA[]	
Work	Order Number: J	57220345	Chain of Custody	# FOS-054-5 WUS-UU9-	18.
Shipp	ing Container ID:_	54WS 212	Air Bill #	776,780,770	
1.	Custody Seals o	n shipping container intact?		NA [Yes [] No []	
2.	Custody Seals d	ated and signed?		NA [YYes [] No []	
3.	Chain of Custod	y record present?		Yes [No []	
4.	Cooler temperate	ure:NAM 5.Ve	rmiculite/packing	g materials is NA[] Wet[].Dry./	
6.	Number of samp	les in shipping container:	27	_	
7.	Sample holding			NA [Yes [] No []	
8.	Samples have:tapetapt	als		ard labels propriate samples labels	
9.	Samples are:broken	ndition	hav	king re air bubbles samples requiring head space)	
10.	Sample pH taken	? NA[] pH<2[pH>2/	pH>9 []	
11.		, Sample Collector Listed? * ion only. No corrective action	n needed.	Yes [No[]	
12.	Were any anoma	lies identified in sample recei	pt?	Yes [] No []	
13.	Description of an	omalies (include sample num	bers):		
Sample	Custodian:	41-	Date:	2205	
CI	ient Sample ID	Analysis Requested	Condition	Comments/Action	
Client I	nformed on	by	Person cont	tacted	
[] No	action necessary; pr	ocess as is.			
Project	Manager		Date	,	
LS-023	. 9/03. Rev. 5				

PNNL					CHAIN OI	F CUSTODY/	SAMPLE ANAL	YSIS REQUEST		5-009-124
Collector	DURATE	2007				/Requester		Telephone No.	MSIN FAX	
SAF No.	L D. WA		-			tewart ng Origin		509-376-5056 Purchase Order/Charge	Code	
W05-009					Samplin					
Project Title RCRA September	er 2005				Losh	pek 075-	SAWS-495	Ice Chest No. SML 3	Temp.	
Shinned To (Lab) Severn Trent Inc		1.11			Method Govt	of Shipment		Bill of Lading/Air Bill N	0.	
Protocol RCRA	annormen. Kuo	niana			GOVI		ority: 45 Days	Offsite Property No.		
POSSIBLE SAME	PLE HAZARI	OS/RE	MARKS		WO 4769 J55220 35		SPECIAL INSTRUCTIONS	6 Hold Time 7	Total Activity Exemption:	Yes 🗹 No 🗆
Sample No.	Lab ID	*	Date	Time	No/Type Containe	er	Sample A	Analysis	Pre	servative
B1DT65		W	9-22-05	1016	1x20-mL P	Activity Scan		HK67R		None
B1DT65		w	1-62-02	(0/0	1x500-mL G/P	UTOT_KPA: Uraniu	m (1)	.,,,,		HNO3 to pH <2
B1DT65		w			1x500-mL P	9131_COLIFORM: C	Coliform (1)	1.50€		Na2S2O3 Cool 4C
B1DT65		w			1x500-mL P	TC99_ETVDSK_LS6		HCl to pH <2		
B1DT65		w			1x1000-mL P	9310_ALPHABETA	GPC: Gross Beta (1)			HNO3 to pH <2
B1DT65		w	1		1x4000-mL G/P	GAMMALL_GS: List	-1 (9)			None
•										
Relinquished BURN	WALL Print	10	Gerci	- SE	Date/Time \S	Jeff Jens	en Print Sign	SEP 2 2 2005	S = Soil	DS = Drum Solid
Relinquished By	1				Date/Time	Received By	•	Date/Time	SE = Sediment SO = Solid SL = Sludge W = Water	DI. = Drim Liqui T = Tissue WI = Wine L = Liquid
Relinquished By					Date/Time	Received By		Date/Time	O = Oil A = Air	V = Vegetation X = Other
Relinquished By					Date/Time	Received By		Date/Time		
FINAL SAMPL	E Disposal l	Method	(e.g., Return to	customer, per	lab procedure, used in p	process)	Disposed By	****	Date/Time	

DISPOSITION

PNNL					CHAI	N OF	CUSTODY	SAMPLE AN	ALYSIS F	REQUEST			-	W05-		106
Collector	DURAT					Contact/Re	anactor			Telephone No.		MS		FAX	01 1	_
Collector	L.D.W	MT				Dot Stew	vart			509-376-5056			111	FAA		
SAF No. W05-009						Sampling (Origin			Purchase Order/C	harge	Code				
Project Title RCRA September	2005					log hoc		5AW5-H95		Ice Chest No. 5A	14	311	Temp.			
Shinned To (Lah)						Method of				Bill of Lading/Air	Bill N	0.				
Severn Trent Inco Protocol	ornorated. Ric	hland				Govt Tru		ority: 45 Days		Offsite Property	No.					
RCRA POSSIBLE SAMP	LE HAZARI	OS/RE	MARKS		W047	769		SPECIAL INSTRUCT	FIONS Hold	Time	1	Total A	ctivity Exem	nption: Y	es 🗸 1	No 🗔
Sample No.	Lab ID		Date	Time	No/Type	Container		Sa	imple Analysis					Preser	vative	
B1DT57		W	9-22-05	0899	1x20-mL	Р	Activity Scan		HK69	2					None	
B1DT57		w	1	1	1x500-mL	G/P	UTOT_KPA: Uraniu	ım (1)							HNO3 to	pH <2
B1DT57		w			1x500-mL	Р	9131_COLIFORM:	Coliform (1)	1.500						Na2S2O3	Cool 4C
B1DT57		W			1x500-mL	Р	TC99_ETVDSK_LS	SC: Tc-99 (1)							HCI to pH	l <2
B1DT57		W			1x1000-m	L P	9310_ALPHABETA	_GPC: Gross Beta (1)							HNO3 to	pH <2
B1DT57		w	4	1	1x4000-m	L G/P	GAMMALL_GS: Lis	st-1 (9)							None	
6																
						_										
Relinquished By L. D. W. Relinquished By	EK Prid	()	, Wol		Date/	2 2005	Received By Jeff Jenso Received By	en //	Sign	Date/Time Date/Time	15	S SE SO SI.	= Soil = Sediment = Solid = Sludge = Water	T	$I_{\cdot} = D_{\cdot}$	ine
Relinquished By				•	Date/	Time	Received By			Date/Time		O A	= Oil = Air	X	= V	egetation
Relinquished By					Date/	Time	Received By			Date/Time						
FINAL SAMPLI DISPOSITION	E Disposal	Method	i (e.g., Return to	customer, per	lab procedure	, used in proc	cess)	Dispo	esed By	- 27			Dat	e/Time		



Date/T	ime Received:	192205 1510			
Client:	Paw	SDG #: W04	769 NA[]	SAF #:_4	V05-009 NA[]
Work (Order Number:	1220359	Chain of Custod	ly#_ 600	05-009-106, 124
Shippin	ng Container ID:	5ML 311	Air Bill #		
1.	Custody Seals on	shipping container intact?	?	NA [Yes [] No []
2.	Custody Seals da	ted and signed?		·NA	Yes [] No []
3.	Chain of Custody	record present?			Yes [] No []
4.	Cooler temperatu	re: /· S NA[] 5.	Vermiculite/packi	ng material	ls is NA[] Wet[].Dry.J
6.	Number of sampl	es in shipping container:_	12		
7.	Sample holding ti	mes exceeded?		NA[]	Yes [] No H
8.	Samples have:tapecustody sea	ıls		azard label ppropriate	s samples labels
9.	Samples are:in good corbroken	adition	h	eaking ave air bub or samples	bles requiring head space)
10.	Sample pH taken	NA[] pH<	2/1 pH>2/1	pH>9[]	
11.		Sample Collector Listed? on only. No corrective ac			Yes [/ No []
12.	Were any anomal	ies identified in sample re	ceipt?		Yes [] No [/
13.	Description of and	omalies (include sample n	umbers):		· ·
		4./			
Sample	Custodian:	1-fr 1	Date:	09 21	2 05
Clie	ent Sample ID	Analysis Requested	Condition	n	Comments/Action
					_
Client In	formed on	by	Person co	ontacted	
[] No:	action necessary; pro	cess as is.			
Project N	lanager		Date		
LS-023.	9/03, Rev. 5				

PNNL					CHAIN OF	CUSTODY/S	SAMPLE ANALYSI	S REQUEST		5-009-216 of 1
Collector	S. D.R	Bo	Paulac	Tanl	Contact/R			Telephone No. M. 509-376-5056	SIN FAX	
SAF No.	7000	UK	20116	70.0	Sampling (Purchase Order/Charge Code	:	
W05-009 Project Title						075-5445	. H93 pg 52	Ice Chest No. 5 Aus -21	Temp.	
RCRA Sentember Shinned To (Lab)	r 2005				Method of	Shinment	1113 pg 32			
Severn Trent Inc Protocol RCRA	ornorated. Ric	hland			Govt Tru	ıck	rity: 45 Days	Offsite Property No.	N/A	
POSSIBLE SAMP	LE HAZARI	S/RE	MARKS		W09769 J5F240201 Due 11 a	7 TF 012405	SPECIAL INSTRUCTIONS	Hold Time Total A	Activity Exemption:	Yes V No
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Analysi	S	Pres	servative
B1DTD2		W	9/23/05	1203	1x20-mL P	Activity Scan	HI	DCC		None
B1DTD2		W	1		1x500-mL G/P	UTOT_KPA: Uraniun				HNO3 to pH <2
B1DTD2		w		-	1x1000-mL P	906.0_H3_LSC: Tritio	ım (1)			None
B1DTD2		W	1	1	1x500-mL P	TC99_ETVDSK_LSC	:: Tc-99 (1)			HCl to pH <2
Relinquished By	Print		Sign	1/2	Date/Time / Y H	Received By NAVE HAR	Print Sign A		<100 GRatik	
P.R. Breu Relinquished By	un cton	MK	: Jrlw-u		9/23/05 Date/Time	Received By	31 Mon Style	Date/Time SE SO SI W Date/Time O A		DS
Relinquished By					Date/Time	Received By		Date/Time		

Disposed By

Date/Time

FINAL SAMPLE

DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

PNNL	-				СНАІ	N OF	CUSTODY	//SAMPLE AN	ALYSIS F	REQUEST	C.O.0	W0	5-009-194
Collector)	R. Re	P 1	INCTOR	,		Contact/Re					SIN	FAX	
SAF No.	CI DK	CWI	NETON			Dot Stev Sampling (509-376-5056 Purchase Order/Charge Code			
W05-009 Project Title								1/07					
RCRA September	er 2005					07	3-54WS	H93 pg 51	/	Ice Chest No 5 Aws - 2	2 16	шр.	
Shinned To (Lah) Severn Trent Inc	ornorated, Ric	hland				Method of Govt Tru				Bill of Lading/Air Bill No.	114		
Protocol RCRA							P	riority: 45 Days		Offsite Property No.	1		
POSSIBLE SAMP	LE HAZARI	DS/RE	MARKS	ı	W0476	7		SPECIAL INSTRUCT	IONS Hold	I Time Total A	Activity E	Exemption:	Yes V No
Sample No.	Lab ID	*	Date	Time	No/Type	Container		Sar	mple Analysis			Pre	eservative
B1DTD7		W	9/23/05	0845	1x20-mL	Р	Activity Scan		HL DC F				None
B1DTD7		W	1123/03		1x500-mL	G/P	UTOT_KPA: Uran		11-0-1				HNO3 to pH <2
B1DTD7	TD7 W 1x					. P	TC99_ETVDSK_L	.SC: Tc-99 (1)					HCI to pH <2
	-	-		-									-
							2)				,		
Relinquished By D.R. BREW Relinquished By	Print Print). R	Brung	k.	Date/1	5	Received By AVE 11 Received By	ARBINSON	Stgn (10	Date/Fime SF SC SI SI W	= Soil = Sedir = Solid = Sluds = Wate	re	DS = Drum So DL = Drum Lia T = Tissue WI = Wine L = Liquid
Relinquished By	elinquished By						Received By			Date/Time O A	= Oil = Air		V = Vegetation X = Other
Relinquished By					Date/1	Γime	Received By			Date/Time			

Disposed By

Date/Time

FINAL SAMPLE

DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

PNNL					CHAI	N OF	CUSTODY	//SAMPLE ANALYSIS	REQUEST	C.O.C. #	W05-009	-195		
oer. Bri	EWING	ON				Contact/Re			Telephone No.	MSIN Pa	FAX	1		
SAF No.						Dot Stew Sampling (509-376-5056 Purchase Order/Charge	Code				
W05-009 Project Title	Ĭ.					1	To CANIE	1487	Ice Chest No. CM. K) /) Temn				
RCRA Sentembe	r 2005						15-SAWS	-1193	Ice Chest No. SHUS		•			
Severn Trent Inc	ornorated. Ric	hland				Method of Govt Tru			Bill of Lading/Air Bill N	· N/A				
Protocol RCRA							P	riority: 45 Days	Offsite Property No.	NIA				
POSSIBLE SAMP	LE HAZARI	OS/RE	MARKS	W	01769			SPECIAL INSTRUCTIONS H	fold Time	Total Activity Exer	mption: Yes 🗹	No L		
Sample No.	Lab ID		Date	Time		Container		Sample Analysis			Preservative			
B1DTD8		W	92305	0715	1x20-mL	Р	Activity Scan	HLDG	269		None			
B1DTD8		W	1	1	1x500-mL	G/P	UTOT_KPA: Uran				HNO3	to pH <2		
B1DTD8	TD8 W 1x500-mL P						TC99_ETVDSK_L	TC99_ETVDSK_LSC: Tc-99 (1) HCl to						
D-11 - 1-1-1-1	7.1		a.		5	142	9)		Date/Time 1976	<100	1000			
Relinquished By	VINGTO	In C	1) Kign	· fr	Date/I	3 LUU5	Received By	Print Sign	Date/Time*	100	MaikM			
Relinquished By	4114617	,	1-prem	The state of the s	Date/I	ime	Received By	Print Sign	Date/Time	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water	T = WI =	Drum Solid Drum Liqui Tissue Wine Liquid		
Relinquished By					Date/1	fime	Received By	·	Date/Time	O = Oil A = Air	V =	Vegetation Other		
Relinquished By					Date/I	fime	Received By		Date/Time					
FINAL SAMPLE		Method	(e.g., Return to	customer, per	r lab procedure	, used in proc	cess)	Disposed By		Da	nte/Time			



Date/Ti	me Received: 9	-23-05 14:2				105-059		
Client:_	PNNL A	RW SDG #: WO	9769	_NA[] SAF	#:_le	05-007 N	AA[]	
Work C	order Number: 7	51240201				,-009-195		
Shippin	g Container ID:_	SALS 212	Air Bi	11 #			WOS.	009-194
1.	Custody Seals o	n shipping container intac		1	NA()	Yes [] No []	W05.	009-11
2.	Custody Seals d	ated and signed?				Yes [] No []		
3.	Chain of Custod	y record present?				Yes [No []		
4.	Cooler temperat	ure:NAIY	5.Vermicu	ılite/packing m	aterials	is NA [] Wet	[].Dry[]	
6.	Number of samp	les in shipping container	20	5				
7.	Sample holding	times exceeded?		1	VALT	Yes [] No []		
8.	Samples have:	als		hazard		amples labels		
9.	Samples are:in good cobroken				r bubb nples r	oles equiring head sp	pace)	
10.	Sample pH taker	1? Y & S NA[] PH	<2 L/	pH>2// pH	>9[]			
11.		, Sample Collector Listed ion only. No corrective a		ded.		Yes [No []		
12.	Were any anoma	lies identified in sample r	eceipt?			Yes [] Noff		
13.	Description of an	omalies (include sample	numbers):					
Sample (Custodian:	box of		Date: 9/	23/	65		
Clie	nt Sample ID	Analysis Requested		Condition		Comments/A	ction	
Client Inf	ormed on	by		Person contacte	:d	. •		
] No a	ction necessary; pro	ocess as is.						
Project M	anager			Date			 .	
C 007 0	102 D 6							

PNNL					CHAIN O	CUSTODY/SAMPLE ANALYSIS RE		105-054-11 age 1 of 1
Collector A e	0-				Conta	te director.	elephone No. MSIN	FAX
SAF No.	BREWI	W 6 T	WD		Dot	wart Origin Pu	509-376-5056 irchase Order/Charge Code	
105-054					Samo			
Project Title LTMC & 2UP1-C. S	SEPTEMBE	R 200	15			TS-SAWS-493 pg 52	e Chest No. SAW5-212 Temp.	•
Shinned To (Lah)					Metho	f Shipment Bil	ll of Lading/Air Bill No. N/A	
Severn Trent Incorn Protocol	orated, Ricl	nland			Gov	Priority AF Doug	ffsite Property No.	
SURV	WAZARR.	C (D) E	MADIC			Priority: 45 Days SPECIAL INSTRUCTIONS Hold Ti	MA Total Activity Eve	mption: Yes V No
POSSIBLE SAMPLE	, HAZAKD	S/KE	MARKS	i J	009769 SI 240 20 Due 11 0	os .	ine Total Activity Exc	IIIDAOI. 103 EJ 110 E
Sample No.	Lab ID	*	Date	Time	No/Type Contai			Preservative
B1DTY1		W	9/25/05	1256	1x1000-mL P	906.0_H3_LSC: Tritium (1)	Ц	None
B1DTY1		W	1/0/0	122	1x20-mL P	Activity Scan	7	None
B1DTY1		w			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	100000000000000000000000000000000000000	None
B1DTY1		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)		HNO3 to pH <2
B1DTY1		w			1x500-mL G/P	UTOT_KPA: Uranium (1)		HNO3 to pH <2
B1DTY1		w			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)		HCI to pH <2
			4				-1	00 004
Relinquished By DIR. BREW	Print	1	Sign	1.	Date/Time	Received By Print Sign	Date/Time W	
PiR. BREL	INGTO	IN L	Fruw	ite	9/23/05	DAVE HARBINSON STORY	$\sqrt{23/05}$ S = Soil	DS = Dnm Solid
Relinquished By			1	()	Date/Time	Received By	Date/Time SE = Sedimen SO = Solid	T = Tissue
				V			SI. = Sludge W = Water	WI = Wine I. = Liquid
Relinquished By					Date/Time	Received By	Date/Time O = Oil A = Air	V = Vegetation X = Other
Relinquished By					Date/Time	Received By	Date/Time	The state of the s
FINAL SAMPLE DISPOSITION	Disposal N	Method	(e.g., Return to	customer, per	lab procedure, used in	Disposed By	De	ate/Time

PNNL					СНАІ	N OF	CUSTODY	/SAMPLE ANALYSIS	REQUEST	C.O.C.#	105-054-14	4
Calleston						C		A colo	Training No.		ge 1 of 1	
	BRei	1/16	GTOW			Contact/Re Dot Stev			Telephone No. 509-376-5056	MSIN	FAX	
SAF No. 105-054						Sampling (Origin		Purchase Order/Charge	e Code		
Project Title			_			MIS	-SA S = 119	72 51	Ice Chest No. SAWS	-2/7 Temp.		
LTMC & 2UP1-(Shinned To (Lab)	C. SEPTEMB	ER 200	15			Method of	-5Aw5- 149 Shipment	(3 pg 31	Bill of Lading/Air Bill N	T .		\dashv
Severn Trent Inc.	ornorated. Ric	hland				Govt. Tr	uck			N/A		_
Protocol SURV							Pri	iority: 45 Days	Offsite Property No.	WIA		
POSSIBLE SAMP ** **	LE HAZARI	OS/RE	MARKS		w01	769		SPECIAL INSTRUCTIONS Ho	d Time	Total Activity Exer	mption: Yes 🗹 No	
Sample No.	Lab ID	٠	Date	Time	No/Type	Container		Sample Analysis			Preservative	
B1DTY6		W	9/23/05	1021	1x1000-n	nL P	906.0_H3_LSC: Tri	itium (1)	DC J		None	
B1DTY6		W	1	1	1x20-mL	P	Activity Scan	17-			None	
B1DTY6		w			2x4000-n	nL G/P	I129LL_SEP_LEPS	S_GS_LL: I-129 (1)			None	
B1DTY6		W			3x1000-n	nL G/P	SRISO_SEP_PREG	CIP_GPC: Sr-90 (1)			HNO3 to pH <	:2
B1DTY6		W			1x500-ml	_ G/P	UTOT_KPA: Uraniu	um (1)			HNO3 to pH <	:2
B1DTY6		W	1		1x500-ml	. P	TC99_ETVDSK_LS	SC: Tc-99 (1)			HCl to pH <2	
										1		
Relinquished By	Print		1 Sign	1	Date	Time ALV	Received By	Print Sign	Date/Time / UZA)	Matrix #	
D.R. BREW.	11	O.R	Sign	G.	9/23/09		DAVS HAD	Birson AT	Pate/Time (42)		CPM	
-A C -A			. /	5	Date		Received By	ion sing pe	Date/Time	S = Soil SE = Sediment SO = Solid SL = Sludge	T = Tissue WI = Wine	Liani
Relinquished By		0,1		/	Date/	Time	Received By		Date/Time	W = Water O = Oil A = Air	I. = Liquid V = Vegetal X = Other	
Relinquished By					Date/	Time	Received By		Date/Time			
FINAL SAMPLI DISPOSITION		Method	(e.g., Return to	customer, per	lab procedur	e, used in proc	ess)	Disposed By		Da	te/Time	



Date/Ti	me Received: 9-	-13-05	4.26		105-054	
Client:_	PNNL 1	Paw SDG #	wo 9769	NA[] SAF#:	: 605-009 N	[] AN
Work C	order Number: 2	751240202				5, IOS-054-14
Shippin	g Container ID:_	SAWS 212	Air F	311 #		WOS.009-194 IOS -054-11
1.	Custody Seals o	on shipping contain		NA	(Yes [] No []	105-054-11 w05-009-11
2.	Custody Seals d	dated and signed?			Yes [] No []	
3.	Chain of Custod	dy record present?	. West		Yes [No []	
4.	Cooler temperat	ture:NA	5.Vermi	culite/packing mate	erials is NALT Wet	[].Dry[]
6.	Number of samp	ples in shipping co	ontainer: 2	5		
7.	Sample holding	times exceeded?		NĄ	Yes [] No []	
8.	Samples have:tapecustody se	eals		hazard lab	bels ate samples labels	
9.	Samples are: ·in good cobroken	ondition			les requiring head sp	pace)
10.	Sample pH taker	n? YES NA[] pH<2 [/	pH>2/1 pH>9	[]	
11.		n, Sample Collecto		eded.	Yes [No []	
12.	Were any anoma	alies identified in s	ample receipt?		Yes [] Nof	
13.	Description of ar	nomalies (include	sample numbers	5):		•
Sample (Custodian:	200/6	2	Date: 9/2	3/05	
Clien	nt Sample ID	Analysis Requ	uested	Condition .	Comments/A	ction
Client Inf	ormed on	by		Person contacted		,
] No a	ction necessary; pro	rocess as is.				
Project M	anager			Date		
C 007 C	1/02 Pau 5					

PNNL					CHAIN OF	CUSTODY	//SAMPLE ANALYS	SIS REQUEST		5-009-234	
Collector	DURAT				Contact/F	Requester		Telephone No.	MSIN FAX	1 of 1	-
	RTSIC				Dot Ste	wart	25	509-376-5056			-
SAF No. W05-009					Sampling	Origin		Purchase Order/Charge	Code		
Project Title RCRA September	- 2005				27	5- SAL-S	1198	Ice Chest No.	550 Temp.		1
Shinned To (Lah)	1 2005					f Shipment		Bill of Lading/Air Bill No			1
Severn Trent Inc	ornorated. Ric	hland			Govt T	ruck		Office Parameter No.			1
Protocol RCRA						P	riority: 45 Days	Offsite Property No.			
POSSIBLE SAMP	LE HAZARI	DS/RE	MARKS		W04769 751240 203		SPECIAL INSTRUCTIONS	Hold Time T	otal Activity Exemption	: Yes 🗹 No 🗀	
					Due 11 07	05					
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Analy	ysis	Pr	reservative	,
B1DTC4		W	9-23-05	1256	1x20-mL P	Activity Scan	HLD	PCL		None	
B1DTC4		W	1	1	1x500-mL G/P	UTOT_KPA: Uran				HNO3 to pH <2	
B1DTC4		W	4	L	1x500-mL P	TC99_ETVDSK_L	-SC: Tc-99 (1)			HCI to pH <2	
				•							
-											
					Date/Time/44			Date/Time 144/5	<100 GF) R A	
Relinquished By	X Prin		Sign		SEP 2 3 2005		Bin Sol	SEP 2 3 2005			
Relinquished By	15/4/				Date/Time	Received By	0.7500	Date/Time	S = Soil SE = Sediment SO = Solid SI = Shidge W = Water	DS = Drim Soli DI = Drim Lion T = Tissue WI = Wine	
Relinquished By					Date/Time	Received By		Date/Time	W = Water O = Oil A = Air	I. = Liquid V = Vegetation X = Other	n
Relinquished By					Date/Time	Received By		Date/Time			
FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time								e			

PNNL					CHAI	N OF	CUSTODY/	SAMPLE ANALY	YSIS R	EQUEST	C.O.C. #	W05-009-244
												age <u>1</u> of <u>1</u>
Collector	PLT. SK					Contact/R				Telephone No. 509-376-5056	MSIN	FAX
SAF No.	y my the department	PI Medio				Dot Stev Sampling				Purchase Order/Charge	Code	
W05-009												
Project Title RCRA September	r 2005					075-	SAMS H	98		Ice Chest No. Surl	536 Temp	•
Shinned To (Lab)						Method of	Shipment			Bill of Lading/Air Bill N	lo.	
Severn Trent Inco Protocol	ornorated Ric	hland			<u> </u>	Govt Tri				Offsite Property No.		
RCRA							Pri	ority: 45 Days				
POSSIBLE SAMP	LE HAZARI	DS/RE	MARKS	ı	W0476	9		SPECIAL INSTRUCTIONS	Hold	Time	Total Activity Exe	mption: Yes 🗹 No
Sample No.	Lab ID	*	Date	Time	No/Type	Container		Sample Ar	nalysis			Preservative
B1DRW4		W	9-23-09	1050	1x20-mL	P	Activity Scan		460	cm		None
B1DRW4		W	1	1	1x1000-n	L P	906.0_H3_LSC: Trit	ium (1)				None
B1DRW4	1DRW4 W 1x10					ıL P	9310_ALPHABETA	GPC: Alpha + Beta (2)				HNO3 to pH <2
				-								
				11								
			/		,				1			
Relinquished By Relinquished By	CKLE Print	L	81gm		SEP 2 3 Date/	2005	Received By AVE HAR Received By	Print Sign	Y L'SE	P 2 3 Z005 Date/Time	<100 (S = Soil SE = Sediment SO = Solid SI = Sludge	DS = Drum Solid
Relinquished By					Date/	Time	Received By			Date/Time	W = Water O = Oil A = Air	I. = Limid V = Vegetation X = Other
Relinquished By					Date/	Γime	Received By			Date/Time		
FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/								ate/Time				

PNNL						N OF	CUSTODY	/SAMPLE ANALYSIS	REQUEST	C.O.C. #	W05-009	-250
										Pa	ge <u>1</u> of	1
Collector	PLT SICILL					Contact/Re			Telephone No.	MSIN	FAX	
SAF No.	TE E SICAL	in .				Dot Stev Sampling (509-376-5056 Purchase Order/Charge O	Code		
W05-009												
Project Title RCRA Septemb	er 2005					215.	- SAMS	498	Ice Chest No. Sull 550 Temp.			
Shinned To (Lah)		-				Method of	Shipment		Bill of Lading/Air Bill No.			
Severn Trent Inc	corporated. Ric	hland				Govt Tru			Offsite Property No.			
RCRA							Pr	iority: 45 Days				
POSSIBLE SAMI	PLE HAZARI)S/RE	MARKS		W047	67		SPECIAL INSTRUCTIONS	Hold Time To	otal Activity Exen	nption: Yes 🗹	No L
Sample No.	Lab ID		Date	Time	No/Type	e Container		Sample Analysis			Preservative	
B1DRW8		W	9-13-05	0850	1x20-mL	P	Activity Scan	LI LI	LOCN		None	
B1DRW8		w	1	1	1x1000-n	nL P	906.0_H3_LSC: Tr				None	
B1DRW8		W	+		1x1000-n	IL P	9310_ALPHABET	A_GPC: Alpha + Beta (2)			HNO3	to pH <2
				17								
	-											·
	-				-							
		\vdash										
	-	\vdash			-							
		\vdash		1								
									1415			
	CKLE Print		Sign	S	EP 23	2005	Received By DAVE HATT	Print Sign		<100 (S = Soil SE = Sediment	DS =	Drum Solid
Relinquished By						Time	Received By		Date/Time	SO = Solid SI = Sludge W = Water	T = WI =	Tissue
Relinquished By					Date/	Γime	Received By			O = Oil A = Air		Vegetation Other
Relinquished By					Date/	Time	Received By		Date/Time			
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, pe	r lab procedur	e, used in proc	cess)	Disposed By		Dat	re/Time	



Date	Time Received:	9 23 05 1495		100 - 013
Clier	nt: Pac	SDG #:_ wof76	67 NA[] S	A05 - 013 SAF #: 605 - 009 NA[]
Worl	c Order Number:	1512to 203	Chain of Custody	# A05-013-4,5 W05-009-250, 299, 2
Shipp	oing Container ID:_	SML 550	Air Bill #	WOS-009-250, 299, 2
1.	Custody Seals o	n shipping container intact?		NA [] Yes [] No []
2.	Custody Seals d	ated and signed?		- NA [Y Yes [] No []
3.	Chain of Custod	y record present?		Yes [No []
4.	Cooler temperat	ure:NA [] 5.1	Vermiculite/packing	materials is NA[] Wet[].Dry
6.	Number of samp	les in shipping container:	19	_
7.	Sample holding	times exceeded?		NA [Yes [] No []
8.	Samples have:tapecustody se	als		ard labels ropriate samples labels
9.	Samples are:in good cobroken	ndition		cing e air bubbles samples requiring head space)
10.	Sample pH taken	? NA[] pH<2	pH>2 [/	pH>9[]
11.		, Sample Collector Listed? '		Yes / No[]
12.	Were any anoma	lies identified in sample rec	eipt?	Yes [] No [
13.	Description of an	omalies (include sample nu	mbers):	
Sampl	e Custodian:	1	Date: 09	23.5
С	lient Sample ID	Analysis Requested	Condition	Comments/Action
Client	Informed on	by	Person conf	acted
[] No	action necessary; pro	ocess as is.		
Project	Manager		Date	
LS-023	, 9/03, Rev. 5			

PNNL					CHAI	OF	CUSTODY/	SAMPLE ANALY	SIS R	REQUEST	C.O.C. #	A0	5-01;	
Collector	T SICKLE				C	Contact/Re				Telephone No.	MSIN	FAX		
SAF No.	- Do GROGRO Made				5	Dot Stew				509-376-5056 Purchase Order/Charge Code				
A05-013 Project Title						~ ~				Ice Chest No.	Temp.			
Performance Asses	ssment Moni	toring	Sept 2005			Aethod of	-SAWS H	98		SML 330				
Shinned To (Lab) Severn Trent Incom	morated. Ric	hland			ľ	Govt Tru				Bill of Lading/Air Bill I	10.			
Protocol Other							Pric	ority: 45 Days		Offsite Property No.				
POSSIBLE SAMPL ** **	E HAZARI	S/RE	MARKS		WO 976 J\$I 24 Du	10204	05	SPECIAL INSTRUCTIONS	Hold	Time	Total Activity Exer	nption: Y	es 🗸 h	10
Sample No.	Lab ID		Date	Time	No/Type (Sample Ans	alysis			Preser	vative	
B1DMV7	-	W	9-23-05	1550	1x20-mL F		Activity Scan		HLDC	P		1	lone	
B1DMV7		w	1-000	1	2x4000-mL	G/P	I129LL_SEP_LEPS_		TLDC			1	Vone	
B1DMV7		W			1x500-mL	P	TC99_ETVDSK_LS0	C: Tc-99 (1)				1	HCI to pH	<2
B1DMV7		W	+	+	1x500-mL	G/P	UTOT_KPA: Uraniur	n (1)				I	HNO3 to p	pH <2
·														
Relinquished By Parameter Relinquished By	x //	7	Sign		SEP Date/A	_2005	Received By	Print Sign	~	Date/Time/4-4/5 SEP 2 3 2005 Date/Time	SI. = Sludge W = Water	Matrix * O CP	I = Wi = I.id	ine auid
Relinquished By					Date/Ti	me	Received By			Date/Time	O = Oil A = Air	v x	= Ve = Of	egetation ther
Relinquished By					Date/Ti	me	Received By			Date/Time				
FINAL SAMPLE DISPOSITION	Disposal N	Method	(e.g., Return to	customer, per	lab procedure,	used in proc	ess)	Disposed By			Da	te/Time		

PNNL						N OF	CUSTODY/	SAMPLE ANALY	SIS R	EQUEST	C.O.C. #		05-0	13-5
											P	ige <u>l</u>	of	1
Collector	DURAT					Contact/Re				Telephone No. 509-376-5056	MSIN	FAX		
SAF No.	RISC	KLE.				Sampling (Purchase Order/Charge Code				
A05-013 Project Title						2-2	0:	A /0		Ice Chest No.				- 2
Performance Ass	essment Mon	toring	Sept 2005				- SAWS H	98		SML 330				
Shinned To (Lah) Severn Trent Inc	ornorated. Ric	hland				Method of Govt Tru				Bill of Lading/Air Bill !	No.			
Protocol Other							Pri	ority: 45 Days	1	Offsite Property No.				
POSSIBLE SAMP	LE HAZARI	OS/RE	MARKS		w01	767		SPECIAL INSTRUCTIONS	Hold	Time	Total Activity Exe	mption:	Yes 🗸	No L
Sample No.	Lab ID		Date	Time	No/Type	Container		Sample An	nalysis			Pre	servative	
B1DMT9		W	9-23-05	0859	1x20-mL	P	Activity Scan		HLDE	T			None	
B1DMT9		w	1		2x4000-m	nL G/P	I129LL_SEP_LEPS	GS_LL: I-129 (1)	1/				None	
B1DMT9		W			1x500-mL	. P	TC99_ETVDSK_LS	C: Tc-99 (1)		7			HCI to	pH <2
B1DMT9		W		1	1x500-mL	G/P	UTOT_KPA: Uraniu	m (1)					HNO3	to pH <2
				120					1					
Relinquished By DURAT R. T. Sto Relinquished By Relinquished By			Sign	SEF	Date/	2005 Time	Received By Received By Received By	Print Sign	609	Date/Time 14-45 Date/Time Date/Time	S = Soil SE = Sedimer SO = Solid SL = Sludge W = Water O = Oil		DS = DI. = T = WI = I. =	Drum Solid Drum Liqui Tissue Wine Liquid Vegetation
					244					armour a limb	A = Air			Other
Relinquished By					Date/	Time	Received By			Date/Time				
FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in possible DISPOSITION				e, used in proc	ess)	Disposed By			D	ite/Time				



Date/	Time Received:	9 23 05 1495		100 -013	
Client	: Pac	SDG #:_ 40	4769 NA[]	SAF #: 405 -009	_NA[]
Work	Order Number:	151240204	Chain of Custod	y# A05-013-4,5 W05-009-250	
Shipp	ing Container ID:_	SML 550	Air Bill #	W05 - 809 - 23 U	- 277 , 25 -
1.	Custody Seals or	n shipping container intact	?	NA [Yes [] No []
2.	Custody Seals da	ated and signed?		· NA [Yes [] No []
3.	Chain of Custod	y record present?		Yes [] No []
4.	Cooler temperate	ure:NA[] 5	.Vermiculite/packi	ng materials is NA[] W	et [].Dry [/]
6.	Number of samp	les in shipping container:_	19		
7.	Sample holding	times exceeded?		NA [Yes [] No []
8.	Samples have:tapecustody se	als		azard labels ppropriate samples labels	
9.	Samples are:	ndition		aking ave air bubbles or samples requiring head	I space)
10.	Sample pH taken	? NA[] pH-	2/1 pH>2/1	pH>9[]	
11.		, Sample Collector Listed'		Yes // No	[]
12.	Were any anoma	lies identified in sample re	ceipt?	Yes[] No	K
13.	Description of an	omalies (include sample r	numbers):		
Sample	e Custodian:	41		23.5	
CI	ient Sample ID	Analysis Requested	Conditio	n Comment	ts/Action
Client I	nformed on	by	Person co	ontacted	
[] No	action necessary; pro	ocess as is.			
Project	Manager		Date		
LS-023	, 9/03, Rev. 5				

10/29/2005 1:46:50 PM	Sam	ple Prepai	ration/An	Balance Id:1120482733					
384868, Pacific Northwest National La	oortories,	BN I-129 Prp/Sep				4	Pipet #:		
Pacific Northwest National Lab	11763	TB Gamma by L 5I CLIENT: HA!					Sep1 DT/Tm Tech:		
Report Due: 11/07/2005	14/67	51 CLIENT: HAI					Sepi Di/im Tech:		
Batch: 5273296 WATER SEQ Batch, Test: None	pCi/L		PM, Quo	ote: SS , 57	Sep2 DT/Tm Tech:				
			1 1 1 1 1 1 1 1 1		Prep Tech: ,GiroirB				
Work Order, Lot, Sample DateTime Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id		Analyst, Comments: it/Date	
T HK66R-1-AC J5I220345-1-SAMP	3940.00g,in	ITA4720 10/19/05,pd		37.8	100	LY	1345	11/2/05 R	
.09/22/2005 10:06	AmtRec: 2	0ML,500P,4XLP,2X4LP	#Containers: 8			Scr:	Alpha: -1.31E-03 uCi/Sa	Beta: 3.73E-03 uCl/Sa	
2 HLDCH-1-AC J5I240202-1-SAMP	3903.30g,in	ITA4721 10/19/05,pd		38.0		LS	1346	11/2/05 R	
09/23/2005 12:56	AmtRec: 2	0ML,2X500P,4XLP,2X4L	P #Containers: 9			Scr:	Alpha: 1.30E-03 uCi/Sa	Beta: 5.84E-04 uCi/Sa	
3 HLDCJ-1-AC J51240202-2-SAMP	3922.60g,in	ITA4722 10/19/05,pd		37.5		4	1529	11/2/05 8	
09/23/2005 10:21	AmtRec: 2	0ML,2X500P,4XLP,2X4L	P #Containers: 9			Scr: A	pha: 8.44E-03 uCi/Sa 2.8E-01L	Beta: -1.75E-03 uCi/Sa	
4 HLDCP-1-AA	3900.00g,in	ITA4723 10/19/05,pd		38.1		15	1530	11/2/05 n	
J5I240204-1-SAMP 	AmtRec: 2	0ML,2X500P,2X4LP	#Containers: 5	91.1		Scr:	Alpha: -1.67E-04 uCi/Sa	Beta: -2.70E-05 uCi/Sa	
5 HLDCT-1-AA J51240204-2-SAMP	3900.00g,in	ITA4724 10/19/05,pd		38.3		Lf	1730	11/2/01010	
09/23/2005 08:59	AmtRec: 2	0ML,2X500P,2X4LP	#Containers: 5			Scr:	Alpha: 1.00E-03 uCi/Sa	Beta: 4.05E-04 uCi/Sa	
6 HLDCT-1-AE-X J5I240204-2-DUP	3816.10g,in	ITA4725 10/19/05,pd		38.3		L5	1730		
09/23/2005 08:59	AmtRec: 2	0ML,2X500P,2X4LP	#Containers: 5			Scr:	Alpha: 1.00E-03 uCi/Sa	Beta: 4.05E-04 uCi/Sa	
7 HLQ4E-1-AA-B J5I300000-296-BLK ←	3835.30g,in	ITA4726 10/19/05,pd		36.8		4	1930		
09/23/2005 08:59	AmtRec:	#Containe	rs: 1		V	Scr:	Alpha:	Beta:	
STL Richland Key: In - Initial Amt, f Richland Wa. pd - Prep Dt, r - R		luted Amt, s1 - Sep1		Page 1	ISV	- Insufficient Volun	ne for Analysis	WO Cnt: 7 Prep_SamplePrep v4.8.14	

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¥5.

10/29/2005 1:46:52 PM			San	ple Prepa	ration/A	nalysis		Balanc	Balance Id:1120482733			
			BN I-129 Prp/Se TB Gamma by I					Pipet #:				
Report Due: 11/07/2005			5I CLIENT: HA			Sep1 DT/Tm Tech:						
Batch: 5273296		pCi/L						Sep2 DT/Tm 7	Tech:			
SEQ Batch, Test: None									Tech: ,GiroirB			
	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments		
8 HLQ4E-1-AC-C J5I300000-296-LCS		4000.00g,in	ISD0576 09/24/05,pd		40.	2	15	1930	11/2/05010			
09/23/2005 08:59		AmtRec:	#Containe	ers: 1			Scr:	Alpha:		Beta:		
phneutra	1											
All Clients for Batch: 384868, Pacific Nor	thwest Nation	al Labortorie	s Pacific	Northwest Na	itional Lab	, SS , 5767	1					
HK66R1AC-SAMP Constitue I-129 RDL:1.00E		LCL:	UCL:	RPD:								
HLQ4E1AA-BLK: I-129 RDL:1.00E	+00 pCi/L	LCL:	UCL:	RPD:								
HLQ4E1AC-LCS: I-129 RDL:5	pCi/L	LCL:70	UCL:130	RPD:20								
HK66R1AC-SAMP Calc Info Uncert Level (#s). HLQ4E1AA-BLK:		to SaDt: Y	Blk Subt.:	N Sci.No	ot.: Y	ODRs: B						
Uncert Level (#s).	: 2 Decay	to SaDt: Y	Blk Subt.:	N Sci.No	ot.: Y	ODRs: B						

Sci.Not.: Y

ODRs: B

Approved By

Uncert Level (#s).: 2

Blk Subt .: N

Decay to SaDt: Y

Date:

Prep_SamplePrep v4.8.14

11/3/2005 3:01:06 PM

ICOC Fraction Transfer/Status Report ByDate: 11/3/2004, 11/8/2005, Batch: '5273296', User: *ALL Order By DateTimeAccepting

Batch Work	Ord CurStat	us Ad	ccepting		Comments
5273296			V- 7-11-8-		
4 <i>C</i>	CalcC	GiroirB	10/27/2005 9:07	7:23	
SC		wagarr	IsBatched	9/30/2005 11:37:43 AM	ICOC_RADCALC v4.8.08
SC SC		GiroirB	InPrep	10/27/2005 9:07:23 AM	RICH-RC-5016 REVISION 5
SC		GiroirB	Prep1C	10/29/2005 1:53:20 PM	RICH-RC-5016 REVISION 5
SC .		NortonJ	InSep1	10/31/2005 2:54:04 PM	RICHRC5025 REV3
SC		NortonJ	Sep1C	11/2/2005 11:55:46 AM	RICH-RC-5025 REVISION3
SC		StringerR	InCnt1	11/2/2005 12:00:02 PM	RICH-RD-0007 REVISION 5
SC		DAWKINSO	CalcC	11/2/2005 8:13:58 PM	RICH-RD-0007 REVISION 5
AC		GiroirB	10/29/2005 1:53	3:20	
IC		NortonJ	10/31/2005 2:54	4:04	
AC		NortonJ	11/2/2005 11:55	5:46	
AC .		StringerR	11/2/2005 12:00	0:02	
4C		DAWKINSO	11/2/2005 8:13:	58 PM	

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

	Sam	ple Prepa	ration/An	Balance Id:1120482733						
National Labortories , ab	TA Gamma by H	PGE			•	•				
1004 104	51 CLIENT: HAN	IFORD				Sep1 DT/Tm Tech:				
ER pCi/L		PM, Qu	ote: SS , 57	Sep2 DT/Tm Tech:						
						Prep Te	ch: ,GiroirB	Desc		
otal Initial Aliquot nt/Unit Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
1956.00g,in			100	100		96 1726) 1/0/2-005 or	0		
III			100							
	20ML,5XLP,4LP #C	ontainers: 7			Scr:	Alpha: 1.30E-03 uCi/Sa	Beta: -3	.24E-04 uCi/Sa		
1982.80g,in						(-1) 1770	11/02/osare			
•						48				
	20ML,3X500P,LP,4LP	#Containers: 6			Scr:	Alpha: -5.73E-04 uCi/Sa	A / Beta: 3.	11E-04 uCi/Sa		
1982.80g,in						1915				
						613	3			
AmtRec: 2	20ML,3X500P,LP,4LP	#Containers: 6			Scr:	Alpha: -5.73E-04 uCi/Sa	a Beta: 3.	11E-04 uCi/Sa		
1997.60g,in						13 1721	1			
					2	11/2/0500				
	20ML,3X500P,LP,4LP	#Containers: 6			Scr:	Alpha: 7.11E-04 uCi/Sa	Beta: -4	.67E-04 uCi/Sa		
1994.30g,in						(13 A) K				
***					•	11/2/05				
AmtRec:	#Container	s: 1			Scr:	Alpha:		Beta:		
1962.70g,in	QCAG1138				1.	7 1722				
	08/22/05,pd		1	\vee	4	7				
							V			
	ab Dotal Initial Aliquot Amt/Unit 1956.00g,in AmtRec: 2 1982.80g,in AmtRec: 2 1997.60g,in AmtRec: 2 1994.30g,in	TA Gamma by H 5I CLIENT: HAN PCI/L Initial Aliquot Armt/Unit Prep Date 1956.00g,in AmtRec: 20ML,5XLP,4LP #C 1982.80g,in AmtRec: 20ML,3X500P,LP,4LP 1997.60g,in AmtRec: 20ML,3X500P,LP,4LP 1994.30g,in AmtRec: 20ML,3X500P,LP,4LP	TA Gamma by HPGE 5I CLIENT: HANFORD TA Gamma by HPGE 5I CLIENT: HANFORD TA Gamma by HPGE 5I CLIENT: HANFORD PM, Que Table T	TA Gamma by HPGE 5I CLIENT: HANFORD ER PCI/L PM, Quote: SS, 57 Dish Ppt or Geometry 1956.00g,in AmtRec: 20ML,5XLP,4LP #Containers: 6 1982.80g,in AmtRec: 20ML,3X500P,LP,4LP #Containers: 6 1997.60g,in AmtRec: 20ML,3X500P,LP,4LP #Containers: 6 1994.30g,in AmtRec: #Containers: 1	TA Gamma by HPGE 5I CLIENT: HANFORD ER PCI/L PM, Quote: SS, 57671 Initial Aliquot Amt/Unit QC Tracer Prep Date Dish Size Geometry Count Time Min	TA Gamma by HPGE 5I CLIENT: HANFORD ER PCI/L PM, Quote: SS , 57671	TA Gamma by HPGE 51 CLIENT: HANFORD Sep1 DT/Tm Ter Sep2 DT/Tm Ter Sep2 DT/Tm Ter Prep Ter Dtal Initial Aliquot Amt/Unit Prep Date Size Geometry Time Min Detector Id (24hr) Circle 1956.00g,in AmtRec: 20ML,5XLP,4LP #Containers: 7 Sor: Alpha: 1.30E-03 uC/Sa 1982.80g,in AmtRec: 20ML,3X500P,LP,4LP #Containers: 6 Sor: Alpha: -5.73E-04 uC/Sa 1997.60g,in AmtRec: 20ML,3X500P,LP,4LP #Containers: 6 Sor: Alpha: -5.73E-04 uC/Sa 1994.30g,in AmtRec: 20ML,3X500P,LP,4LP #Containers: 6 Sor: Alpha: -5.73E-04 uC/Sa 1994.30g,in AmtRec: #Containers: 1 Sor: Alpha: -5.73E-04 uC/Sa Sor: Alpha: -5.73E-04 uC/Sa	### TA Gamma by HPGE SI CLIENT: HANFORD Sep1 DT/Tm Tech:		

10/29/2005	10:54:50	AM
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Sample Preparation/Analysis

Balance Id:1120482733

Prep Tech: ,GiroirB

Pipet #: _

AW Gamma PrpRC5017 **TA Gamma by HPGE 5I CLIENT: HANFORD** Report Due: 11/07/2005

Sep1 DT/Tm Tech:

Batch: 5273300

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Work Order, Lot,	Total	Initial Aliquot	QC Tracer	Dish	Ppt or	Count	Detector	Count On Off	CR Analyst,	Comments:
Sample DateTime	Amt/Unit	Amt/Unit	Prep Date	Size	Geometry	Time Min	Id	(24hr) Circle	Init/Date	

Comments: HK69R-SAMP "Comments: gamma count dup on dif det. Bg"

All Clients for Batch:

384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

HK1MJ1AE-SA	AMP Constituent Li	st:									
Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL: 6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL: .00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
HLQ4M1AA-BI	LK:										
Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL: 0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
HLQ4M1AC-LC	CS:										
Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:	pCi/L	LCL:70	UCL:130	RPD:20
RA-228	RDL:	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:	pCi/L	LCL:70	UCL:130	RPD:20
U-238	RDL:	pCi/L	LCL:70	UCL:130	RPD:20						
HK1MJ1AE-SA	AMP Calc Info:										
Uncert	t Level (#s) .: 2	Decay to	SaDt: Y	Blk Subt .:	N Sci.Not.	Y ODRs	: B				
HLQ4M1AA-BI	LK:										
Uncert	t Level (#s) .: 2	Decay to	SaDt: Y	Blk Subt .:	N Sci.Not.	Y ODRs	: B				
HLQ4M1AC-LO	cs:										
Uncert	t Level (#s) .: 2	Decay to	SaDt: Y	Blk Subt .:	N Sci.Not.	Y ODRs	: B				
		_									

Page 2

Approved By

Date:

11/3/2005 3:12:42 PM

ICOC Fraction Transfer/Status Report ByDate: 11/3/2004, 11/8/2005, Batch: '5273300', User: *ALL Order By DateTimeAccepting

Batch Work O	rd CurStat	us A	ccepting		Comments
273300					
C	CalcC	GiroirB	10/27/2005 9:0	7:27	
C		wagarr	IsBatched	9/30/2005 11:37:43 AM	ICOC_RADCALC v4.8.08
0		GiroirB	InPrep	10/27/2005 9:07:27 AM	RICH-RC-5017 REVISION 4
C		GiroirB	Prep1C	10/29/2005 10:56:07 AM	RICH-RC-5017 REVISION 4
C		ScottM	InPrep2	10/31/2005 6:58:24 AM	RICH-RC-5017 REVISION 4
C		ScottM	Prep2C	11/2/2005 10:54:54 AM	RICH-RC-5017 REVISION 4
C		StringerR	InCnt1	11/2/2005 11:42:24 AM	RICH-RD-0007 REVISION 5
C		DAWKINSO	CaicC	11/2/2005 9:29:33 PM	RICH-RD-0007 REVISION 5
C		GiroirB	10/29/2005 10:	56:07	
Ç		ScottM	10/31/2005 6:5	8:24	
C		ScottM	11/2/2005 10:54	4:54	
C		StringerR	11/2/2005 11:4	2:24	
Č		DAWKINSO	11/2/2005 9:29:	33 PM	

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

10/29/2005 10:39:12 AM	Sample Prep	aration/Ana	lysis	Balance Id:1120482733			
384868, Pacific Northwest National Labortories Pacific Northwest National Lab	AZ Gross Alpha PrpRC5014 S7 Gross Alpha by GPC usi 5I CLIENT: HANFORD		Pipet #: Sep1 DT/Tm Tech:				
Report Due: 11/07/2005		-1-00 570					
Batch: 5273267 WATER pCi/	L PM, Q	uote: SS , 5767	/1	Sep2 DT/Tm Tech:			
	1,0000			Prep Tech: ,G	iroirB Scoll		
	Aliquot QC Tracer Dish	Ppt or Geometry	Count Detector Time Min Id		Analyst, Comments: it/Date		
1 HK1MJ-1-AC 200.60	g,in			1100 1111	1 5540		
J5I200383-2-SAMP	1	5 41.7	100 10A	1809 114	05000		
09/20/2005 12:16	AmtRec: 20ML,5XLP,4LP #Containers: 7	1	Scr:	Alpha 1.30E-03 uCi/Sa	Beta: -3.24E-04 uCi/Sa		
2 HK65H-1-AC 144.60	g,in	1					
J5I220336-3-SAMP		1 313	103				
09/22/2005 08:25	AmtRec: 20ML,2X500P,2XLP #Containers: 5		Scr:	Alpha: 1.22E-03 uCi/Sa	Beta: 7.22E-04 uCi/Sa		
3 HLDCM-1-AC 196.90	g,in						
J5I240203-2-SAMP		39.7	100				
09/23/2005 10:50	AmtRec: 20ML,2XLP #Containers: 3		Scr:	Apha: 4.63E-04 uCi/Sa	Beta: -4.88E-04 uCi/Sa		
4 HLDCM-1-AE-X 201.00	g,in						
J5I240203-2-DUP		39,3	10 D				
09/23/2005 10:50	AmtRec: 20ML,2XLP #Containers: 3		Scr:	Alpha: 4.63E-04 uCi/Sa	Beta: -4.88E-04 uCi/Sa		
5 HLDCN-1-AC 199.40	g,in						
J5I240203-3-SAMP	- 1	3416	10E	9			
09/23/2005 08:59	AmtRec: 20ML,2XLP #Containers: 3		Scr:	Alpha: 1.66E-04 uCl/Sa	Beta: 6.18E-04 uCi/Sa		
6 HLQ1F-1-AA-B 203.20	g,in			1	1		
J5I300000-267-BLK		03	10A	2109 1/4	1/050P		
09/23/2005 10:50	AmtRec: #Containers: 1		Scr:	Alpha:	/ Beta:		
7 HLQ1F-1-AC-C 197.20	g,in ASD3687		110				
J5I300000-267-LCS	10/07/05,pd	6.4	1013	1			
09/23/2005 10:50	AmtRec: #Containers: 1		Scr:	Alpha:	Beta:		
			*				
	mt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Dt, ec-Enrichment Cell, ct-Cocktailed Added	Page 1	ISV - Insufficient Volu	me for Analysis	WO Cnt: 7 Prep_SamplePrep v4.8.14		

10/29/2005 10:39:13 AM		Samp	le Preparation	Balance Id:1120482733					
		AZ Gross Alpha P	rpRC5014 by GPC using Am-2	Pip	Pipet #:				
Report Due: 11/07/2005		51 CLIENT: HANF				Sep1 DT/Tm T	ech:		
Batch: 5273267	pCi/L	1,0				Sep2 DT/Tm T	ech:		
SEQ Batch, Test: None						II Prep T	ech: ,GiroirB		
Work Order, Lot, Sample DateTime Am	tal Initial Aliquot //Unit Amt/Unit	QC Tracer Prep Date	Dish Ppt o Size Geome	r Count	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Commen	
Pillocor									
384868, Pacific North KIMJIAC-SAMP Constituent ALPHA RDL:3	west National Labortor: List: pCi/L LCL:		rthwest National	Lab, SS , 5767	1				
384868, Pacific North KIMJIAC-SAMP Constituent ALPHA RDL:3 ILQ1F1AA-BLK: ALPHA RDL:3	List:	UCL: R		Lab, SS , 5767	1				
384868, Pacific North KIMJIAC-SAMP Constituent ALPHA RDL:3 LQ1F1AA-BLK: ALPHA RDL:3	List: pCi/L LCL:	UCL: R	PD:	Lab, SS , 5767	1				
384868, Pacific North KIMJIAC-SAMP Constituent ALPHA RDL:3 LQ1F1AA-BLK: ALPHA RDL:3 LQ1F1AC-LCS: Am-241 RDL: KIMJIAC-SAMP Calc Info: Uncert Level (#s).:	List: pCi/L LCL: pCi/L LCL: pCi/L LCL:70	UCL: R	PD:	Lab, SS , 5767	1				
384868, Pacific North KIMJIAC-SAMP Constituent ALPHA RDL:3 LQ1F1AA-BLK: ALPHA RDL:3 LQ1F1AC-LCS: Am-241 RDL: KIMJIAC-SAMP Calc Info: Uncert Level (#s).: LQ1F1AA-BLK: Uncert Level (#s).:	List: pCi/L LCL: pCi/L LCL: pCi/L LCL:70 Decay to SaDt: Y	UCL: R UCL: R	PD: PD: PD:20		1				
IKIMJIAC-SAMP Constituent ALPHA RDL:3 ILQIFIAA-BLK: ALPHA RDL:3 ILQIFIAC-LCS: Am-241 RDL: IKIMJIAC-SAMP Calc Info: Uncert Level (#s):: ILQIFIAA-BLK:	List: pCi/L LCL: pCi/L LCL: pCi/L LCL:70 Decay to SaDt: Y Decay to SaDt: Y	UCL: R UCL: R UCL:130 R B1k Subt.: N	PD: PD: PD: PD:20 Sci.Not.: Y	ODRs: B	1				

Page 2

11/7/2005 1:47:14 PM

ICOC Fraction Transfer/Status Report ByDate: 11/7/2004, 11/12/2005, Batch: '5273267', User: *ALL Order By DateTimeAccepting

Batch Wo	rk Ord CurStat	us A	ccepting		Comments
5273267					
4C	CalcC	GiroirB	10/27/2005 9:0	7:11	
SC		wagarr	IsBatched	9/30/2005 11:37:43 AM	ICOC_RADCALC v4.8.08
SC		GiroirB	InPrep	10/27/2005 9:07:11 AM	RICH-RC-5014 REVISION 6
SC		GiroirB	Prep1C	10/29/2005 10:42:28 AM	RICH-RC-5014 REVISION 6
SC		ScottM	InPrep2	10/31/2005 6:54:50 AM	RICH-RC-5014 REVISION 6
SC		ScottM	Prep2C	11/3/2005 2:21:41 PM	RICH-RC-5014 REVISION 6
SC		DAWKINSO	InCnt1	11/3/2005 5:48:13 PM	RICH-RD-0003 REVISION 4
SC		DAWKINSO	CalcC	11/4/2005 10:21:31 PM	RICH-RD-0003 REVISION 4
4C		GiroirB	10/29/2005 10:	42:28	
4C		ScottM	10/31/2005 6:5	4:50	
4C		ScottM	11/3/2005 2:21	:41 PM	
4C		DAWKINSO	11/3/2005 5:48	:13 PM	
4C		DAWKINSO	11/4/2005 10:2	1:31	

Page 1

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

10/29/2005 10:39:14 AM	Samp	le Prepa	aration/Anal	ysis		Balance	d:1120482733	
384868, Pacific Northwest National Pacific Northwest National Lab	S8 Gross Beta by	GPC using	g Sr/Y-90 curve		Pipet			
Report Due: 11/07/2005	1)4769 51 CLIENT: HANI	FORD				Sep1 DT/Tm Tec	eh:	
Batch: 5273293 WATER	pCi/L	PM, Qu	iote: SS , 5767	1		Sep2 DT/Tm Ted	:h:	
SEQ Batch, Test: None						Prep Tec	ch: ,GiroirB \	>cott
Work Order, Lot, Total Sample DateTime Amt/Unit	Initial Aliquot QC Tracer Amt/Unit Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HK1L3-1-AC	201.80g,in	3			32 D	2120	113/0502	
J5I200383-1-SAMP		1,5	51.7	200	322	20 2	1	
09/20/2005 10:31	AmtRec: 20ML,5XLP #Cont	ainers: 6		1	Scr:	Alpha: 2.01E-06 uCi/Sa	Beta: 1.	50E-06 uCi/Sa
2 HK1MJ-1-AD	201.90g,in				32A			
J5I200383-2-SAMP			60.9					
09/20/2005 12:16	AmtRec: 20ML,5XLP,4LP #Co	ntainers: 7			Scr:	Alpha: 1.30E-03 uCi/Sa	Beta: -3.	24E-04 uCi/Sa
3 HK65H-1-AD	169.60g,in				32B			
J5I220336-3-SAMP		1	75.8		500			
09/22/2005 08:25	AmtRec: 20ML,2X500P,2XLP #0	Containers: 5			Scr:	Alpha: 1.22E-03 uCi/Sa	Beta: 7.	22E-04 uCi/Sa
4 HK65H-1-AG-X	170.00g,in				32C	h		
J5I220336-3-DUP			26.1	1	520	J	b	
09/22/2005 08:25	AmtRec: 20ML,2X500P,2XLP #6	Containers: 5			Scr:	Alpha: 1.22E-03 uCi/Sa	Beta: 7.	22E- AGCi/Sa
5 HK69R-1-AC	83.80g,in				319	177	0 11/2	8/05
J5I220359-1-SAMP			41.1	1	211	112	11	te"
09/22/2005 10:16	AmtRec: 20ML,3X500P,LP,4LP #	Containers: 6			Scr:	Alpha: -5.73E-04 uCi/Sa	Beta: 3.	11E-04 uCi/Sa
6 HK692-1-AC	100.80g,in				31	h		
J5I220359-2-SAMP			40.5		71			
09/22/2005 08:59	AmtRec: 20ML,3X500P,LP,4LP #	Containers: 6			Scr:	Alpha: 7.11E-04 uCi/Sa	Beta: -4	67E-04 uCi/Sa
7 HLDCM-1-AD	132.00g,in		1.		~ 31	_		1
J5I240203-2-SAMP		,	1 54.5		\\ \tag{1}			
09/23/2005 10:50	AmtRec: 20ML,2XLP #Cont	ainers: 3	<i>V</i>		Scr:	Alpha: 4.63E-04 uCi/Sa	Beta: -4	.88E-04 uCi/Sa
	,							
	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s - Reference Dt, ec-Enrichment Cell, ct-Cockta		Page 1	ISV	- Insufficient Volur	me for Analysis		VO Cnt: 7 SamplePrep v4.8.14
P=p=4.	, , , , , , , , , , , , , , , , , , , ,							

Sample Preparation/Analysis 10/29/2005 10:39:15 AM Balance Id:1120482733 384868, Pacific Northwest National Labortories . BC Gross Beta PrpRC5014 Pipet #: Pacific Northwest National Lab S8 Gross Beta by GPC using Sr/Y-90 curve Sep1 DT/Tm Tech: 5I CLIENT: HANFORD Report Due: 11/07/2005 PM, Quote: SS, 57671 Batch: 5273293 WATER pCi/L Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: .GiroirB (0) Total Initial Aliquot QC Tracer Dish Ppt or Count Detector Count On | Off CR Analyst Comments: Work Order, Lot. Prep Date Size Geometry Time Min ld (24hr) Circle Init/Date Amt/Unit Amt/Unit Sample DateTime 194.00g,in 8 HLDCN-1-AD 200 151240203-3-SAMP 115 6/11 AmtRec: 20ML,2XLP Scr: Alpha: 1.66E-04 uCi/Sa Beta: 6.18E-04 uCVSa #Containers: 3 09/23/2005 08:59 9 HLQ3R-1-AA-B 190.90g,in J5I300000-293-BLK 0. 09/22/2005 08:25 AmtRec: #Containers: 1 Scr: Alpha: Beta: 10HLQ3R-1-AC-C **BESB2568** 195.20q.in 10/24/05,pd J5I300000-293-LCS 0.5 Scr: Alpha: Beta: 09/22/2005 08:25 AmtRec: #Containers: 1 Comments: All Clients for Batch: Pacific Northwest National Lab, SS , 57671 384868, Pacific Northwest National Labortories HK1L31AC-SAMP Constituent List: BETA RDL:4.00E+00 pCi/L LCL: UCL: RPD: HLQ3R1AA-BLK: RDL: 4 pCi/L LCL: UCL: RPD: BETA ILQ3R1AC-LCS: Sr-90 RDL: pCi/L LCL:70 UCL: 130 RPD: 20 HK1L31AC-SAMP Calc Info: Decay to SaDt: Y B1k Subt .: N Sci.Not.: Y ODRs: B Uncert Level (#s) .: 2 HLO3R1AA-BLK: Blk Subt .: N Sci.Not .: Y ODRs: B Uncert Level (#s) .: 2 Decay to SaDt: Y HLO3R1AC-LCS: Uncert Level (#s) .: 2 Decay to SaDt: Y Blk Subt .: N Sci.Not.: Y ODRs: B **WO Cnt: 10** ISV - Insufficient Volume for Analysis STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 Prep_SamplePrep v4.8.14 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

11/7/2005 1:48:51 PM

ICOC Fraction Transfer/Status Report ByDate: 11/7/2004, 11/12/2005, Batch: '5273293', User: *ALL Order By DateTimeAccepting

Batch Wor	rk Ord CurState	us Ad	ccepting		Comments
5273293					
AC	InCnt2	GiroirB	10/27/2005 9:07	7:19	
SC		wagarr	IsBatched	9/30/2005 11:37:43 AM	ICOC_RADCALC v4.8.08
SC		GiroirB	InPrep	10/27/2005 9:07:19 AM	RICH-RC-5014 REVISION 6
SC		GiroirB	Prep1C	10/29/2005 10:42:15 AM	RICH-RC-5014 REVISION 6
SC		ScottM	InPrep2	10/31/2005 6:53:49 AM	RICH-RC-5014 REVISION 6
C		ScottM	Prep2C	11/3/2005 2:20:41 PM	RICH-RC-5014 REVISION 6
C		DAWKINSO	InCnt1	11/3/2005 9:10:38 PM	RICH-RD-0003 REVISION 4
C		DAWKINSO	InCnt2	11/4/2005 10:22:12 PM	RICH-RD-0003 REVISION 4
C		GiroirB	10/29/2005 10:4	42:15	
C		ScottM	10/31/2005 6:5	3:49	
AC		ScottM	11/3/2005 2:20:	:41 PM	
AC		DAWKINSO	11/3/2005 9:10:	:38 PM	
AC .		DAWKINSO	11/4/2005 10:2:	2:12	

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

0/25/2005 5:03:50 PM Sample Preparation/Analysis Balance Id:PJ 4000 101 384868, Pacific Northwest National Labortories CL Sr-90 Prp/SepRC5006(5071) Pipet #: NA Pacific Northwest National Lab TL Sr-85 by Nal and Sr-90 by GPC 7 day ingrowth 11.09 1 Sep1 DT/Tm Tech: 10-28-05 **5I CLIENT: HANFORD** Report Due: 11/07/2005 11250AM Sep2 DT/Tm Tech: 11-4-05 WATER pCi/L PM, Quote: SS, 57671 Batch: 5273298 SEQ Batch, Test: None 10-25-05 Prep Tech: ,FABREM CR Analyst, Work Order, Lot. QC Tracer Tracer Dish Count On | Off Comments: Total Initial Aliquot Ppt or Count Detector Init/Date Sample DateTime Amt/Unit Amt/Unit Prep Date Yield Size Geometry Time Min ld (24hr) Circle 1017 11/2/05 1 HK1L3-1-AD 1000.20q,in SRTB12674 1.661 all 10/21/05.pd J51200383-1-SAMP 1.9940 30 100 26 8330 351 23.8 Ex:7/10/2006 1319 26 605 09/20/2005 10:31 AmtRec: 20ML,5XLP #Containers: 6 Scr: Alpha: 2.01E-06 uCi/Sa Beta: 1.50E-06 uCi/Sa 11/2/35 2 HK1MJ-1-AF 1000.40g,in SRTB12675 1.587 311 1017 10/21/05.pd J5I200383-2-SAMP 20800 7630 351 2 05 1 Ex:7/10/2006 1319 23.2 Scr: Beta: -3.24E-04 uCi/Sa 09/20/2005 12:16 AmtRec: 20ML,5XLP,4LP #Containers: 7 Alpha: 1.30E-03 uCi/Sa 1.602 11/2/05 R 3 HK66R-1-AD 1001.00g,in SRTB12676 1053 Gill 10/21/05,pd J51220345-1-SAMP 2.0477 7823 1351 5 05 K Ex:7/10/2006 1319 22.9 09/22/2005 10:06 AmtRec: 20ML.500P.4XLP.2X4LP #Containers: 8 Scr: Alpha: -1.31E-03 uCi/Sa Beta: 3.73E-03 uCi/Sa 2/05 m 4 HK66R-1-AF-X 1000.00g,in 1.711 SRTB12677 31 1053 10/21/05,pd J5I220345-1-DUP 2.010 .8512 351 ~ 20 5 Ex:7/10/2006 1319 23.2 09/22/2005 10:06 AmtRec: 20ML,500P,4XLP,2X4LP #Containers: 8 Scr: Alpha: -1.31E-03 uCi/Sa Beta: 3.73E-03 uCi/Sa

Page 1

10/25/2005 5:03:50 PM Sample Preparation/Analysis Balance Id:PJ 4000 (5) 384868, Pacific Northwest National Labortories . CL Sr-90 Prp/SepRC5006(5071) Pipet #: NA Pacific Northwest National Lab TL Sr-85 by Nal and Sr-90 by GPC 7 day ingrowth 11:09 Sep1 DT/Tm Tech: 10-28-05 5I CLIENT: HANFORD Report Due: 11/07/2005 11:50 4 PM. Quote: SS . 57671 Batch: 5273298 WATER pCi/L Sep2 DT/Tm Tech: 11-4-05 SEQ Batch, Test: None 10-25-05 Prep Tech: ,FABREM Comments: QC Tracer Dish Ppt or Detector Count On | Off CR Analyst, Work Order, Lot. Total Initial Aliquot Tracer Count Size ld (24hr) Circle Init/Date Sample DateTime Amt/Unit Amt/Unit **Prep Date** Yield Geometry Time Min 25 1.616 911 1129 SRTB12678 5 HLDCH-1-AD 1000.50g,in 11/2/05 10/21/05,pd J5I240202-1-SAMP 2.0101 30 .8039 135 05 K Ex:7/10/2006 229 OSk 160 Alpha: 1.30E-03 uCi/Sa AmtRec: 20ML.2X500P.4XLP.2X4LP #Containers: 9 Scr: Beta: 5.84F-04 uCi/Sa 09/23/2005 12:56 1.580 311 1129 6 HLDCJ-1-AD 280.00g,in SRTB12679 10/21/05,pd J5I240202-2-SAMP 1.9993 35 .7903 05 Ex:7/10/2006 1319 234 AmtRec: 20ML,2X500P,4XLP,2X4LP #Containers: 9 Scr: Alpha: 8.44E-03 uCi/Sa 2.8E-011 Beta: -1.75E-03 uCi/Sa 09/23/2005 10:21 1.435 11/2/05 R 1000.00g,in 7 HLQ4K-1-AA-B SRTB12680 911 1208 10/21/05,pd J5I300000-298-BLK 2.0100 135 Ex:7/10/2006 1319 23.7 #Containers: Scr: 09/22/2005 10:06 AmtRec: Alpha: 311 1.449 05 8 HLQ4K-1-AC-C 1000.00a.in SRSG1133 1208 09/14/05.pd J5I300000-298-LCS -0149 5 Ex:7/10/2006 23. AmtRec: #Containers: 1 Scr: Alpha: Beta: 09/22/2005 10:06 WO Cnt: 8 Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 STL Richland Page 2 ISV - Insufficient Volume for Analysis Prep SamplePrep v4.8.14 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

Sample Preparation/Analysis

CL Sr-90 Prp/SepRC5006(5071)
TL Sr-85 by Nal and Sr-90 by GPC 7 day ingrowth

Balance	ld:PJ	4000

ipet	#:			

Report Due: 11/07/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

sepi Diriili iecii

Batch: 5273298 SEQ Batch, Test: None pCi/L

Sep2 DT/Tm Tech:

Prep Tech: FABREM

Work Order, Lot,	Total	Initial Aliquot	QC Tracer	Tracer	Dish	Ppt or	Count	Detector	Count On Off	CR Analyst,	Comments:
Sample DateTime	Amt/Unit	Amt/Unit	Prep Date	Yield	Size	Geometry	Time Min	ld	(24hr) Circle	Init/Date	

Comments:

All Clients 384868,	for Batch: Pacific Northwe	st National	Labortories	Pacific	Northwest Nati	onal Lab	, ss , 57671				
HK1L31AD-SAI	MP Constituent L	ist:	-					-			
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
HLQ4K1AA-BLI	K:										
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:
HLQ4K1AC-LC	S:										
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
HK1L31AD-SAI	MP Calc Info:										
Uncert	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.Not.	: Y	ODRs: B				
HLQ4K1AA-BLI	K:	_									
Uncert	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt .:	N Sci.Not.	: Y	ODRs: B				
HLQ4K1AC-LC	S:										
Uncert	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.Not.	: Y	ODRs: B				
						Approv	red By			Date:	

Page 3

Prep_SamplePrep v4.8.14

11/7/2005 1:30:10 PM

ICOC Fraction Transfer/Status Report ByDate: 11/7/2004, 11/12/2005, Batch: '5273298', User: *ALL Order By DateTimeAccepting

Batch Wo	rk Ord CurStat	tus Ad	cepting		Comments
5273298					
AC	CalcC	FABREM	10/25/2005 11:	28:21	
SC		wagarr	IsBatched	9/30/2005 11:37:43 AM	ICOC_RADCALC v4.8.08
C		FABREM	InSep1	10/25/2005 11:28:21 AM	RICH-RC-5006 REVISION 6
C		FABREM	InPrep	10/25/2005 3:27:39 PM	RICH-RC-5006 Revision 6
C		FABREM	Sep1C	11/1/2005 1:20:01 PM	RICH-RC-5006 REVISION 6
C		BlackCL	InCnt1	11/1/2005 1:32:35 PM	RICH-RD-0007 REVISION 5
C		StringerR	Cnt1C	11/2/2005 12:13:50 PM	RICH-RD-0007 REVISION 5
C		FABREM	InSep2	11/2/2005 6:59:25 PM	RICH-RC-5071 REVISION 4
C		FABREM	Sep2C	11/4/2005 7:10:04 PM	RICH-RC-5071 REVISION 4
C		DAWKINSO	InCnt2	11/4/2005 8:07:14 PM	RICH-RD-0003 REVISION 4
C		StringerR	CalcC	11/6/2005 3:11:45 PM	RICH-RD-0003 REVISION 4
С		FABREM	10/25/2005 3:2	7:39	
С		FABREM	11/1/2005 1:20	:01 PM	
C		BlackCL	11/1/2005 1:32	:35 PM	
C		StringerR	11/2/2005 12:1	3:50	
С		FABREM	11/2/2005 6:59	:25 PM	
C		FABREM	11/4/2005 7:10	:04 PM	
C		DAWKINSO	11/4/2005 8:07	:14 PM	
C		StringerR	11/6/2005 3:11	:45 PM	

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

Sample Preparation/Analysis 10/31/2005 8:31:40 AM Balance Id:1120482733 384868. Pacific Northwest National Labortories . FP Tc-99 Prp/SepRC5065 Pipet #: Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint Sep1 DT/Tm Tech: 51 CLIENT: HANFORD Report Due: 11/07/2005 pCi/L PM, Quote: SS, 57671 Batch: 5273266 WATER Sep2 DT/Tm Tech: SEQ Batch, Test: None **Prep Tech: GiroirB** Work Order, Lot, **Total Amt** Total Initial Aliquot Adj Aliq Amt QC Tracer Count Detector Count On | Off CR Analyst, Comments: (Un-Acidified) Init/Date Sample Date /Unit Acidified/Unit Amt/Unit Prep Date Time Min Id (24hr) Circle 125.20g.in 125.20g 1 HK641-1-AA J5I220336-1-SAMP #Containers: 2 Beta: 1.26E-04 uCi/Sa 09/22/2005 13:04 AmtRec: 20ML.500P Scr: Alpha: -7.32E-05 uCi/Sa TCSG1336 2 HK641-1-AC-S 124.80g,in 124.80g 09/27/05.pd J5I220336-1-MS 09/22/2005 13:04 AmtRec: 20ML,500P #Containers: 2 Scr: Alpha: -7.32E-05 uCi/Sa Beta: 1.26E-04 uCi/Sa 3 HK65D-1-AA 121.50g.in 121.50q J5I220336-2-SAMP 09/22/2005 10:06 AmtRec: 20ML.500P #Containers: 2 Scr: Alpha: -1.72E-05 uCi/Sa Beta: 2.04F-04 uCi/Sa 4 HK65H-1-AE 126.70q.in 126.70g J5I220336-3-SAMP 09/22/2005 08:25 AmtRec: 20ML.2X500P.2XLP #Containers: 5 Scr: Alpha: 1.22E-03 uCi/Sa Beta: 7.22F-04 uCi/Sa 5 HK65R-1-AC 122.60q.in 122.60g J5I220336-4-SAMP 09/22/2005 09:00 AmtRec: 20ML,2X500P,LP #Containers: 4 Scr: Alpha: 4.99E-04 uCi/Sa Beta: 4 81F-05 uCi/Sa 6 HK654-1-AA 123.40q,in 123,40g J51220336-5-SAMP AmtRec: 20ML.2X500P #Containers: 3 Scr: 09/22/2005 11:59 Alpha: -3.12E-04 uCi/Sa Beta: 4.44E-04 uCi/Sa 7 HK69R-1-AE 124.40g,in 124.40g J5I220359-1-SAMP 09/22/2005 10:16 AmtRec: 20ML.3X500P.LP.4LP #Containers: 6 Scr: Alpha: -5.73E-04 uCi/Sa Beta: 3.11E-04 uCi/Sa WO Cnt: 7 STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 ISV - Insufficient Volume for Analysis Page 1 Prep_SamplePrep v4.8.14 pd - Prep Dt. r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

10/31/2005 8:31:41 AM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Labortories, FP Tc-99 Prp/SepRC5065 Pipet #: Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint **5I CLIENT: HANFORD** Sep1 DT/Tm Tech: Report Due: 11/07/2005 PM, Quote: SS, 57671 Batch: 5273266 WATER pCi/L Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,GiroirB Total Initial Aliquot Adj Aliq Amt **QC Tracer** Count Detector Count On | Off CR Analyst, Comments: Work Order, Lot. **Total Amt** (Un-Acidified) **Prep Date** Sample Date /Unit Acidified/Unit Amt/Unit Time Min ld (24hr) Circle Init/Date 8 HK692-1-AE 124.10q.in 124.10a J5I220359-2-SAMP AmtRec: 20ML,3X500P.LP.4LP 09/22/2005 08:59 #Containers: 6 Scr: Alpha: 7.11E-04 uCi/Sa Beta: -4.67E-04 uCi/Sa 9 HLDCC-1-AC 125.90a.in 125.90a J5I240201-1-SAMP 09/23/2005 12:03 AmtRec: 20ML,2X500,LP #Containers: 4 Scr: Alpha: 2.02E-04 uCi/Sa Beta: -6.00E-06 uCi/Sa 10HLDCC-1-AE-X 126.10g,in 126.10g J5I240201-1-DUP AmtRec: 20ML,2X500,LP #Containers: 4 Scr: 09/23/2005 12:03 Alpha: 2.02E-04 uCi/Sa Beta: -6.00E-06 uCi/Sa 11 HLDCF-1-AA 125.90g,in 125.90a J5I240201-2-SAMP 09/23/2005 08:45 AmtRec: 20ML.2X500 #Containers: 3 Scr: Alpha: 1.64E-04 uCi/Sa Beta: -5.11E-05 uCi/Sa 12HLDCG-1-AA 125.00q,in 125.00g J5I240201-3-SAMP 09/23/2005 07:15 AmtRec: 20ML.2X500 #Containers: 3 Scr: Alpha: -2.36E-05 uCi/Sa Beta: -2.70E-05 uCi/Sa 13HLDCH-1-AE 127.50g.in 127.50q J51240202-1-SAMP AmtRec: 20ML.2X500P.4XLP.2X4LP #Containers: 9 09/23/2005 12:56 Scr: Alpha: 1.30E-03 uCi/Sa Beta: 5.84E-04 uCi/Sa 14HLDCJ-1-AE 123.70g,in 123.70g J5I240202-2-SAMP AmtRec: 20ML,2X500P,4XLP,2X4LP #Containers: 9 09/23/2005 10:21 Scr: Alpha: 8.44E-03 uCi/Sa 2.8E-01L Beta: -1.75E-03 uCi/Sa STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 ISV - Insufficient Volume for Analysis WO Cnt: 14 Page 2 Prep_SamplePrep v4.8.14 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

Sample Preparation/Analysis 10/31/2005 8:31:42 AM Balance Id:1120482733 384868, Pacific Northwest National Labortories, FP Tc-99 Prp/SepRC5065 Pipet #: Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint 5I CLIENT: HANFORD Sep1 DT/Tm Tech: Report Due: 11/07/2005 PM. Quote: SS , 57671 Batch: 5273266 WATER pCi/L Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,GiroirB Adj Aliq Amt Work Order, Lot, **Total Amt** Total Initial Aliquot QC Tracer Count Detector Count On | Off CR Analyst. Comments: Acidified/Unit Amt/Unit (Un-Acidified) **Prep Date** Time Min (24hr) Circle Init/Date Sample Date /Unit 15HLDCL-1-AA 125.60g,in 125.60a J5I240203-1-SAMP #Containers: 3 Scr: Beta: 1.65E-04 uCi/Sa 09/23/2005 12:56 AmtRec: 20ML.2X500P Alpha: 1.85E-04 uCi/Sa 125.30g,in 125.30g 16HLDCP-1-AC J5I240204-1-SAMP 09/23/2005 10:50 AmtRec: 20ML,2X500P,2X4LP #Containers: 5 Scr: Alpha: -1.67E-04 uCi/Sa Beta: -2.70E-05 uCi/Sa 17HLDCT-1-AC 125.20g,in 125.20g J5I240204-2-SAMP 09/23/2005 08:59 AmtRec: 20ML.2X500P.2X4LP #Containers: 5 Scr: Alpha: 1.00E-03 uCi/Sa Beta: 4.05E-04 uCi/Sa 18HLQ00-1-AA-B 129.00a.in 129.00g J5I300000-266-BLK 09/23/2005 12:03 AmtRec: #Containers: 1 Scr: Alpha: Beta: 19HLQ00-1-AC-C 132.40g,in 132.40a TCSE1834 09/15/05,pd J5I300000-266-LCS 09/23/2005 12:03 AmtRec: #Containers: 1 Scr: Beta: Alpha: 20HLQ00-1-AD-BN J5I300000-266-IBLK 09/23/2005 12:03 AmtRec: #Containers: 1 Scr: Alpha: Beta: 21 HLQ00-1-AE-BN J5I300000-266-IBLK Scr: 09/23/2005 12:03 AmtRec: #Containers: 1 Alpha: Beta: Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 WO Cnt: 21 ISV - Insufficient Volume for Analysis STL Richland Page 3 Prep_SamplePrep v4.8.14 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

11/4/2005 3:17:41 PM

ICOC Fraction Transfer/Status Report ByDate: 11/4/2004, 11/9/2005, Batch: '5273266', User: *ALL Order By DateTimeAccepting

Q Batch Work (Ord CurStat	us A	ccepting		Comments
5273266					
AC	CalcC	GiroirB	10/27/2005 9:0	7:32	
SC		wagarr	IsBatched	9/30/2005 11:37:43 AM	ICOC_RADCALC v4.8.08
SC		GiroirB	InPrep	10/27/2005 9:07:32 AM	RICH-RC-5016 REVISION 5
SC		GiroirB	Prep1C	10/29/2005 11:14:00 AM	RICH-RC-5016 REVISION 5
SC		GreekA	Sep1C	11/2/2005 9:15:47 PM	RICH-RC-5065 REVISION 5
SC		DAWKINSO	InCnt1	11/2/2005 9:40:49 PM	RICH-RD-0001 REVISION 3
SC		StringerR	CalcC	11/4/2005 9:08:57 AM	RICH-RD-0001 REVISION 3
AC		GiroirB	10/29/2005 11:	14:00	
AC		GreekA	11/2/2005 9:15	47 PM	
AC		DAWKINSO	11/2/2005 9:40:	49 PM	
AC		StringerR	11/4/2005 9:08:	57	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

9/30/2005 11:35:27 AM		Sample P	reparation/A	nalysis	1	Balance Id: 1944	5
384868, Pacific Northwest National Labo Pacific Northwest National Lab		Prp/SepRC5007				Pipet #:	
1 ~	-	tium by Liquid So IENT: HANFORD	eint		Sep1	DT/Tm Tech: 10-28	2-05 au
Report Due: 11/07/2005	+ NOT		A Oueter CC E	7074			
SEQ Batch, Test: None	pCi/L	Pi	/I, Quote: SS , 5	10/1	Sep2	DT/Tm Tech:	
		110		#1#1 #111 I##1	Prep Tech:		
Work Order, Lot, Sample DateTime Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HK1L3-1-AA							
I5I200383-1-SAMP							
09/20/2005 10:31	AmtRec: 20ML,5XLP	#Containers: 6			Scr Rst:	Alpha:	Beta:
2 HK1MJ-1-AA				•			
J5I200383-2-SAMP							
09/20/2005 12:16	AmtRec: 20ML,5XLP,	4LP #Containers:	7		Scr Rst:	Alpha:	Beta:
3 HK65H-1-AA							
J51220336-3-SAMP							
09/22/2005 08:25	AmtRec: 20ML,2X500	P,2XLP #Containe	rs: 5		Scr Rst:	Alpha:	Beta:
4 HK65R-1-AA							
151220336-4-SAMP							
09/22/2005 09:00	AmtRec: 20ML,2X500	P,LP #Containers	: 4		Scr Rst:	Alpha:	Beta:
5 HK66R-1-AA		10.00					
51220345-1-SAMP							
09/22/2005 10:06	AmtRec: 20ML,500P,4	XLP,2X4LP #Contain	ners: 8		Scr Rst:	Alpha:	Beta:
6 HLDCC-1-AA							
51240201-1-SAMP							
09/23/2005 12:03	AmtRec: 20ML,2X500	,LP #Containers:	4		Scr Rst:	Alpha:	Beta:
HLDCH-1-AA							
51240202-1-SAMP							
09/23/2005 12:56	AmtRec: 20ML,2X500	P,4XLP,2X4LP #Conta	iners: 9		Scr Rst:	Alpha:	Beta:
STL Richland Key: In - Initial Amt, fi -	Final Amt, di - Diluted Amt		o2 Page 1		nsufficient Volume for Anal		WO Cnt: 7

9/30/2005 11:35:29	AM		Sample Pro	eparation/A	nalysis		Balance Id: 124	45		
384868, Pacific North			Prp/SepRC5007				Pipet #:			
Pacific Northwest Nat			um by Liquid Sci	nt	Son1 I	Sep1 DT/Tm Tech: 10-38-05 500				
Report Due: 11/07/			ENT: HANFORD							
Batch: 5273295 SEQ Batch, Test: None	WATER	pCi/L	PM,	Quote: SS, 5	Sep2 I	DT/Tm Tech:				
SEQ Batch, Test. None			11881		18181 8111 1881	Prep Tech:				
Work Order, Lot,	Total	Initial Aliquot	QC Tracer	Count	Detector	Count On Off	CR Analyst,	Comments:		
Sample DateTime	Amt/Unit	Amt/Unit	Prep Date	Time Min	Id	(24hr) Circle	Init/Date			
8 HLDCJ-1-AA										
J5I240202-2-SAMP										
						0 D-4	Alaka	Date		
09/23/2005 10:21		AmtRec: 20ML,2X500P	,4XLP,2X4LP #Contain	ers: 9		Scr Rst:	Alpha:	Beta:		
9 HLDCM-1-AA										
J5I240203-2-SAMP 	I II I II II III III									
09/23/2005 10:50		AmtRec: 20ML.2XLP	#Containers: 3			Scr Rst:	Alpha:	Beta:		
10HLDCN-1-AA	24.00	Alki too. Eomejeze	"Outrainerer							
J5I240203-3-SAMP										
09/23/2005 08:59		AmtRec: 20ML,2XLP	#Containers: 3			Scr Rst:	Alpha:	Beta:		
11HLDCN-1-AE-X										
J5I240203-3-DUP										
						_				
09/23/2005 08:59		AmtRec: 20ML,2XLP	#Containers: 3			Scr Rst:	Alpha:	Beta:		
12HLQ31-1-AA-B										
J5I300000-295-BLK	(
09/23/2005 08:59		AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:		
13HLQ31-1-AC-C		Anti too.	"Comamoro. 1							
J5I300000-295-LCS										
09/23/2005 08:59	I ET HELBE DIE	AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:		
14HLQ31-1-AD-BX										
J5I300000-295-MBLK										
		***************************************				1				
09/23/2005 08:59		AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:		
								W0 6 1 44		
		fi - Final Amt, di - Diluted Amt,			ISV -	Insufficient Volume for Anal	ysis	WO Cnt: 14 ICOC v4.8.0		
Richland Wa.	pd - Prep Dt, r - R	Reference Dt, ec-Enrichment Ce	ell, ct-Cocktailed Add	led				1000 44.0.1		

9/30/2005 11:35	34 AM			Sa	mple Pre	eparation/	t	Balance Id: 124	45				
				R H-3 Prp/Se					Pipet #:				
				6 Tritium by	•	nt	Sau 4	DT/Tm Tech: 10-2	8.05 DW				
Report Due: 11/	07/2005		5	I CLIENT: H	ANFORD		Sept	Di/im recn: No di	000				
Batch: 5273295		р	Ci/L						Sep2	DT/Tm Tech:			
SEQ Batch, Test: N	one									Prep Tech:			
	0 -	18				пишипп					II		
Work Order, Lot, Sample DateTime	Total Amt/U		Initial Aliquot Amt/Unit		Tracer ep Date	Count Time Min	Detec		Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
15HLQ31-1-AE-CM	•				•								
J5I300000-295-MLC	S												
			A 473	104-					Car Date	Alaba	Pate		
09/23/2005 08:59			AmtRec:	#Conta	ners: 1				Scr Rst:	Alpha:	Beta:		
16HLQ31-1-AF-BN													
J5I300000-295-IBLK	the sales of the sales and the sales are a			.,									
09/23/2005 08 :59			AmtRec:	#Conta	ners: 1				Scr Rst:	Alpha:	Beta:		
17HLQ31-1-AG-BN													
J5I300000-295-IBLK													
													
09/23/2005 08:59			AmtRec:	#Conta	ners: 1				Scr Rst:	Alpha:	Beta:		
18HLQ31-1-AH-BN													
J5I300000-295-IBLK	CONTRACTOR OF THE PARTY AND												
09/23/2005 08:59			AmtRec:	#Conta	ners: 1				Scr Rst:	Alpha:	Beta:		
			Allu loc.	W OOTHO	1010. 1					, aprilar			
Comments:													
All Clients for	Batch:												
	fic Northwest	National	Labortories	Pacific	Northwes	t National L	ab, SS,	57671					
HK1L31AA-SAMP Co	nstituent Lis	t:											
H-3 RI HLQ311AA-BLK:	L:400	pCi/L	LCL:70	UCL:130	RPD:20								
H-3 RI	L:400	pCi/L	LCL:	UCL:	RPD:								
HLQ311AC-LCS: H-3 RI	L:400	pCi/L	LCL:70	UCL:130	RPD:20								
HLQ311AD-MBLK:													
H-3 RI	L:400	pCi/L	LCL:	UCL:	RPD:								
STL Richland	Key: In - Initial Ar	nt, fi-Fina	Amt, di - Dilute	d Amt, s1 - Se	p1, s2 - Sep2	Page 3		ISV -	Insufficient Volume for Ana	alysis	WO Cnt: 18		
Richland Wa.	pd - Prep Dt,	r - Referen	ce Dt, ec-Enrichm	nent Cell, ct-Co	ocktailed Add	ed					ICOC v4.8.0		

9/30/2005 11:35:40 AM

Sample Preparation/Analysis

Balance Id: 12445

AR H-3 Prp/SepRC5007 S6 Tritium by Liquid Scint

5I CLIENT: HANFORD

Prep Tech:

Pipet #: _____ Sep1 DT/Tm Tech: 10-28-05 pm

Report Due: 11/07/2005

pCi/L

Sep2 DT/Tm Tech:

Batch: 5273295 SEQ Batch, Test: None

									Trep reen.	
Work Order, Lot, Total Sample DateTime Amt/Unit		Initial Aliqu Amt/Unit		C Tracer ep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:	
HLQ311AE-MLCS:				•						
H-3 RDL	:400	pCi/L	LCL:70	UCL:130	RPD:20					
HLQ311AF-IBLK:										
H-3 RDL	:400	pCi/L	LCL:	UCL:	RPD:					
HLQ311AG-IBLK:										
H-3 RDL	:400	pCi/L	LCL:	UCL:	RPD:					
HLQ311AH-IBLK:										
H-3 RDL	:400	pCi/L	LCL:	UCL:	RPD:					
K1L31AA-SAMP Cal	c Info:									
Uncert Level		Decay	to SaDt: Y	Blk Subt.	: N S	ci.Not.: Y	ODRs: B			
HLQ311AA-BLK:										
Uncert Level	(#s).: 2	Decay	to SaDt: Y	Blk Subt.	ı N S	ci.Not.: Y	ODRs: B			
HLQ311AC-LCS:	,				-				,	
Uncert Level	(#s) .: 2	Decay	to SaDt: Y	Blk Subt.	: N S	ci.Not.: Y	ODRs: B			
HLQ311AD-MBLK:	,									
Uncert Level	(#s) .: 2	Decay	to SaDt: Y	Blk Subt.	: N S	ci.Not.: Y	ODRs: B			
HLO311AE-MLCS:	()				-					
Uncert Level	(#s).: 2	Decay	to SaDt: Y	Blk Subt.	: N S	ci.Not.: Y	ODRs: B			
ILO311AF-IBLK:	(,				-					
Uncert Level	(#s).: 2	Decay	to SaDt: Y	Blk Subt.	: N S	ci.Not.: Y	ODRs: B			
LO311AG-IBLK:										
Uncert Level	(#s) .: 2	Decay	to SaDt: Y	Blk Subt.	: N S	ci.Not.: Y	ODRs: B			
ILQ311AH-IBLK:										
Uncert Level	(#s).: 2	Decay	to SaDt: Y	Blk Subt.	: N S	ci.Not.: Y	ODRs: B			
		_								
						Annr	oved By		Date:	
						MDDI	OTOG Dy		Date:	

Page 4

STL Richland Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ISV - Insufficient Volume for Analysis

WO Cnt: 18

ICOC v4.8.08

10/31/2005 11:15:01 AM

ICOC Fraction Transfer/Status Report ByDate: 10/31/2004, 11/5/2005, Batch: '5273295', User: *ALL Order By DateTimeAccepting

CurStatus	Ac Ac	ccepting		Comments
CalcC	McDowellD	10/28/2005 9:4	3:47	
	wagarr	IsBatched	9/30/2005 11:37:43 AM	ICOC_RADCALC v4.8.08
	McDowellD	InSep1	10/28/2005 9:43:47 AM	RICH-RC-5007 REVISION 6
	McDowellD	Sep1C	10/28/2005 2:13:18 PM	RICH-RC-5007 REVISION 6
	DAWKINSO	InCnt1	10/28/2005 4:12:05 PM	RICH-RD-0003 REVISION 4
	DAWKINSO	InCnt1	10/28/2005 4:22:11 PM	RICH-RD-0001 REVISION 3
	StringerR	CalcC	10/30/2005 11:07:19 AM	RICH-RD-0001 REVISION 3
	McDowellD	10/28/2005 2:1	3:18	
	DAWKINSO	10/28/2005 4:1:	2:05	
	DAWKINSO	10/28/2005 4:2	2:11	
	StringerR	10/30/2005 11:	07:19	
		CalcC McDowellD wagarr McDowellD McDowellD DAWKINSO DAWKINSO StringerR McDowellD DAWKINSO DAWKINSO	CalcC McDowellD 10/28/2005 9:4 wagarr IsBatched McDowellD InSep1 McDowellD Sep1C DAWKINSO InCnt1 DAWKINSO InCnt1 StringerR CalcC McDowellD 10/28/2005 2:1 DAWKINSO 10/28/2005 4:2 DAWKINSO 10/28/2005 4:2	CalcC McDowellD 10/28/2005 9:43:47 wagarr IsBatched 9/30/2005 11:37:43 AM McDowellD InSep1 10/28/2005 9:43:47 AM McDowellD Sep1C 10/28/2005 2:13:18 PM DAWKINSO InCnt1 10/28/2005 4:12:05 PM DAWKINSO InCnt1 10/28/2005 4:22:11 PM StringerR CalcC 10/30/2005 11:07:19 AM McDowellD 10/28/2005 2:13:18 DAWKINSO 10/28/2005 4:12:05 DAWKINSO 10/28/2005 4:22:11

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.



*** RE-ANALYSIS REQUEST ***

DUE DATE 11-7.05

CUSTOMER PGW		
ANALYSIS Uranium		
MATRIX water		
LOT NUMBER J5I 2203	36, 751220345, 051220359, 751240201, 2	203,
SAMPLE DELIVERY GROUP	w64768	
OLD BATCH NUMBER 5	273265	
NEW BATCH NUMBER 5	321304	
LAB SAMPLE ID	REASON FOR REQUEST & ANALYSIS COMMENTS	
1)	LCS U5020	
2)	25 0502	
3) .		-
4)		
5)		
6)		
7)		
8)		_
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18) .		
19)		
20)		
LAB QC ID	Assigned with new batch.	

1/18/2005 6:39:58 AM	Sample Prepara	tion/Analysis	Balance Id:112048	32733
84868, Pacific Northwest National La acific Northwest National Lab	bortories , DH UNat_Laser PrpRC5015 SS Total Uranium by KPA		Pipet #:	
eport Due: 11/07/2005	109 5I CLIENT: HANFORD		Sep1 DT/Tm Tech:	
atch: 5321304 WATER EQ Batch, Test: None All Tests: 5273	ug/L' PM, Quote 265 DHSS, 5273266 FPS5, 5273267 AZS7, 5273293 BC		Sep2 DT/Tm Tech: \ Prep Tech: ,Girol	rB Salt
Work Order, Lot, Sample DateTime Total Amt/Unit	Initial Aliquot QC Tracer Co			Comments:
HK65H-2-AF Fruid	00 24.50g,in			
1220336-3-SAMP	m (
	AmtRec: 20ML,2X500P,2XLP #Containers: 5	Sor:	Alpha: 1.22E-03 uCi/Sa	Beta: 7.22E-04 uCi/Sa
HK65R-2-AD	23.60g,in			
1220336-4-SAMP				
	AmtRec: 20ML,2X500P,LP #Containers: 4	Scr:	Alpha: 4.99E-04 uCi/Sa	Beta: 4.81E-05 uCi/Sa
HK654-2-AC	22.40g,in			
1220336-5-SAMP				
0/22/2005 11:59	AmtRec: 20ML,2X500P #Containers: 3	Scr:	Alpha: -3.12E-04 uCi/Sa	Beta: 4.44E-04 uCi/Sa
HK66R-2-AE	29.20g,in			
220345-1-SAMP 	AmtRec: 20ML,500P,4XLP,2X4LP #Containers: 8	Scr	Alpha: -1.31E-03 uCi/Sa	Beta: 3.73E-03 uCi/Sa
HK69R-2-AF	27.20g,in			
220359-1-SAMP				
0/22/2005 10:16	AmtRec: 20ML,3X500P,LP,4LP #Containers: 6	Scr:	Alpha: -5.73E-04 uCi/Sa	Beta: 3.11E-04 uCi/Sa
HK692-2-AF	22.40g,in			
1220359-2-SAMP				
9/22/2005 08:59	AmtRec: 20ML,3X500P,LP,4LP #Containers: 6	Scr:	Alpha: 7.11E-04 uCi/Sa	Beta: -4.67E-04 uCi/Sa
HLDCC-2-AD	23.90g,in			
1240201-1-SAMP	7			
9/23/2005 12:03	AmtRec: 20ML,2X500,LP #Containers: 4	Scr	Alpha: 2.02E-04 uCi/Sa	Beta: -6.00E-06 uCi/Sa
	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	ge 1 ISV - Insufficient Volum	e for Analysis	WO Cnt: 7 Prep_SamplePrep v4.8

Sample Preparation/Analysis 11/18/2005 6:40:00 AM Balance Id:1120482733 384868. Pacific Northwest National Labortories , **DH UNat Laser PrpRC5015** Pipet #: Pacific Northwest National Lab SS Total Uranium by KPA Sep1 DT/Tm Tech: 51 CLIENT: HANFORD Report Due: 11/07/2005 Batch: 5321304 WATER ug/L PM. Quote: SS . 57671 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,GiroirB 8 100101 01100 11116 11001 11000 11111 00111 B101 1001 QC Tracer Count Detector Count On | Off CR Analyst, Comments: Work Order, Lot, Total Initial Aliquot Amt/Unit **Prep Date** Time Min Id (24hr) Circle Init/Date Sample DateTime Amt/Unit Esnal Vol 8 HLDCF-2-AC 25.60g,in J5I240201-2-SAMP 10.0 ml Scr: Alpha: 1.64E-04 uCi/Sa Beta: -5,11E-05 uCi/Sa AmtRec: 20ML,2X500 #Containers: 3 09/23/2005 08:45 9 HLDCG-2-AC 26.00q,in J5I240201-3-SAMP 09/23/2005 07:15 AmtRec: 20ML,2X500 #Containers: 3 Scr: Alpha: -2.36E-05 uCi/Sa Beta: -2.70E-05 uCi/Sa 10HLDCH-2-AF 24.30g,in J5I240202-1-SAMP AmtRec: 20ML,2X500P,4XLP,2X4LP #Containers: 9 Scr: Alpha: 1.30E-03 uCi/Sa Beta: 5.84E-04 uCi/Sa 09/23/2005 12:56 11 HLDCH-2-AG-X 24.90g.in J51240202-1-DUP Beta: 5.84E-04 uCi/Sa 09/23/2005 12:56 AmtRec: 20ML,2X500P,4XLP,2X4LP #Containers: 9 Scr: Alpha: 1.30E-03 uCi/Sa 12HLDCJ-3-AF 23.90g,in J5I240202-2-SAMP AmtRec: 20ML,2X500P,4XLP,2X4LP #Containers: 9 Beta: -1.75E-03 uCi/Sa 09/23/2005 10:21 Scr: Alpha: 8.44E-03 uCi/Sa 2.8E-UNSF2701 13HLDCJ-3-AG-S 23.00g,in 10/19/05,pd J5I240202-2-MS AmtRec: 20ML.2X500P.4XLP.2X4LP #Containers: 9 Beta: -1.75E-03 uCi/Sa 09/23/2005 10:21 Scr: Alpha: 8.44E-03 uCi/Sa 2.8E-14HLDCL-2-AC 26.80g,in J5I240203-1-SAMP AmtRec: 20ML,2X500P #Containers: 3 Scr: Alpha: 1.85E-04 uCi/Sa Beta: 1.65E-04 uCi/Sa 09/23/2005 12:56 WO Cnt: 14 STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 ISV - Insufficient Volume for Analysis Prep_SamplePrep v4.8.14 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

Sample Preparation/Analysis 11/18/2005 6:40:02 AM Balance Id:1120482733 384868, Pacific Northwest National Labortories . **DH UNat Laser PrpRC5015** Pipet #: Pacific Northwest National Lab SS Total Uranium by KPA Sep1 DT/Tm Tech: 5I CLIENT: HANFORD Report Due: 11/07/2005 PM, Quote: SS, 57671 Batch: 5321304 WATER ug/L Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,GiroirB Count On | Off CR Analyst, Comments: QC Tracer Count Detector Work Order, Lot, Total Initial Aliquot (24hr) Circle Init/Date Amt/Unit Amt/Unit **Prep Date** Time Min ld Sample DateTime Retualliol 23.40q.in 15HLDCP-2-AD J5I240204-1-SAMP 100ml AmtRec: 20ML.2X500P.2X4LP #Containers: 5 Scr: Alpha: -1.67E-04 uCi/Sa Beta: -2.70E-05 uCi/Sa 09/23/2005 10:50 16HLDCT-2-AD 25.60g.in J5I240204-2-SAMP Beta: 4.05E-04 uCi/Sa Scr: Alpha: 1.00E-03 uCi/Sa 09/23/2005 08:59 AmtRec: 20ML,2X500P,2X4LP #Containers: 5 30.50g,in 17HQEMX-1-AA-B J5K170000-304-BLK Scr: Beta: Alpha: 09/22/2005 08:25 AmtRec: #Containers: 1 18HQEMX-1-AC-C UNSF2702 24.10a.in 10/19/05,pd J5K170000-304-LCS #Containers: 1 Scr: Alpha: Beta: 09/22/2005 08:25 AmtRec: **UNSC0925** 19HQEMX-1-AD-C 30.60g.in 11/08/05.pd J5K170000-304-LCS AmtRec: #Containers: 1 Scr: Alpha: Beta: 09/22/2005 08:25 Comments: HK69R-SAMP "Comments: gamma count dup on dif det. Bg" All Clients for Batch: 384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671 HK65H2AF-SAMP Constituent List: WO Cnt: 19 ISV - Insufficient Volume for Analysis Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 STL Richland Page 3 Prep_SamplePrep v4.8.14 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

11/26/2005 9:57:54 AM

ICOC Fraction Transfer/Status Report ByDate: 11/26/2004, 12/1/2005, Batch: '5321304', User: *ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	us A	ccepting		Comments
5321304		.			
AC	Cnt1C	GiroirB	11/17/2005 11:	53:57	
SC		andersonp	IsBatched	11/17/2005 10:20:12 AM	ICOC_RADCALC v4.8.16
SC		GiroirB	InPrep	11/17/2005 11:53:57 AM	RICH-RC-5015 REVISION 4
SC		GiroirB	InPrep	11/18/2005 6:27:55 AM	RICH-RC-5016 REVISION 5
SC		GiroirB	InPrep	11/18/2005 6:28:30 AM	RICH-RC-5015 REVISION 4
SC		GiroirB	Prep1C	11/18/2005 6:51:13 AM	RICH-RC-5015 REVISION 4
SC		GiroirB	Prep1C	11/18/2005 6:51:35 AM	RICH-RC-5015 REVISION 4
SC		ScottM	InPrep2	11/18/2005 7:51:38 AM	RICH-RC-5015 REVISION 4
SC		AndersonP	Rev1C	11/22/2005 11:52:02 AM	RICH-RC-0002 REVISION 7
SC		ScottM	Prep2C	11/23/2005 4:05:04 PM	RICH-RC-5015 REVISION 4
SC		BarbosaH	Cnt1C	11/25/2005 3:43:32 PM	RICH-RC-5058 REVISION 6
AC		GiroirB	11/18/2005 6:2	7:55	
AC		GiroirB	11/18/2005 6:2	8:30	
AC		GiroirB	11/18/2005 6:5	1:13	Revision 4
AC		GiroirB	11/18/2005 6:5	1:35	
AC		ScottM	11/18/2005 7:5	1:38	
AC		ScottM	11/23/2005 4:0	5:04	
AC		BarbosaH	11/25/2005 3:4	3:32	

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

/30/2005 11:36:00) AM				IZ	Sample Preparation/Analysis 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION IZ COLIFORM BY METHOD 9223 Balance Id: Pipet #:									
Report Due: 11/07/2005						5I CLIENT: HANFORD								T/Tm Tech:	
Batch: 5273304 SEQ Batch, Test: None									Sep2 DT/Tm Tech: Prep Tech:						
Work Order, Lot, Sample DateTime	Tota Amt/l				Aliquot /Unit		QC Tra	cer	Count Time Min	Detecto		Count On Off (24hr) Circle		CR Analyst, Init/Date	Comments
LQ4T1AA-BLK:	•		***************************************						•						
K69R1AA-SAMP Calc Uncert Level LQ4T1AA-BLK: Uncert Level	(#s).: 2	_		SaDt:			ubt.: N		Sci.Not.: Y	ODRs: B					
LQ4T1AC-LCS: Uncert Level				SaDt:			ubt.: N		Sci.Not.: Y	ODRs: B					
									Appı	coved By				Date:	_
	•														

Page 2